Perspectives of Namibian teachers' development of grade 8 learners' self-regulated learning

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SOLEMN DECLARATION

DECLARATION

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

Handtekening / Signature

14 November 2017

Datum / Date

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ABSTRACT

Many researchers have reported on the value and necessity of self-regulated learning (SRL) in education, social life and beyond. According to Cleary and Zimmerman (2004:538), Zimmerman (2002a:13) and Bandura (2006:164), SRL in school environments increases success in problem solving, academic achievement, intrinsic motivation and task interest since self-regulatory skills provide learners with more positive views towards their futures, empower learners to manage their social behaviour, and support the development of lifelong learning skills. Therefore, the role of teachers in the development of SRL in learners is of vital importance.

The main purpose of this study was to explore teachers' perspectives of how they develop grade 8 learners' SRL. The subsidiary aims of the main aims of the study were to explore teachers' perspectives about the concept SRL and its value for academic success; whether teachers are aware of the concept SRL and trained to use and implement SRL strategies; and to determine which SRL strategies teachers use while teaching different grade 8 subjects. For the purpose of this study, self-regulated learning was viewed through the lens of the social cognitive theory. Zimmerman's (2000) three phase cyclical model of SRL and the adapted model of Zimmerman and Moylan (2009), which is also grounded in Bandura's (1986) social cognitive theory, formed the theoretical framework of the study. In Zimmerman's (2000) model, three phases are distinguished, namely the forethought, performance and self-reflection phases. Each of the three phases comprises specific processes and sub-processes representing the skills self-regulated learners demonstrate when they are completing tasks.

A qualitative research design, guided by an interpretivist paradigm, was utilised to explore teachers' perspectives of how they develop grade 8 learners' SRL. Two rural secondary schools and fourteen teachers were conveniently and purposively selected to participate in the study. Semi-structured interviews and lesson observations were conducted to collect data. Content analysis was used to analyse the data from semi-structured interviews using a thematic approach. Data from the observations are presented in narratives.

The findings revealed that all fourteen participants attested to the value of SRL to enhance learners' academic achievement and to prepare them for life after school. Most participants perceive their roles in the development of SRL as facilitators, guides, mentors, and supervisors who use encouraging words and who monitor learners' progress. Although the majority of the participants said they are aware of SRL, not all of them have received training to develop SRL in learners. Participants' perspectives indicated that they believe the socio-economic and educational situations of grade 8 Namibian learners affect their abilities and willingness to become self-regulated learners. Findings also revealed discrepancies between participants' perspectives

of SRL as seen in the interview data, and their observed teaching strategies to develop SRL. Participants named more strategies they use to develop grade 8 learners' SRL in the interviews, than the strategies the researcher observed in the lessons. The findings of the lesson observations indicate that most participants use strategies to varying degrees to develop the following SRL skills of grade 8 learners: their strategic planning, goal setting, motivation, self-efficacy beliefs, task interest, time management skills, self-assessment skills and skills to work cooperatively with others in a group.

Recommendations are made to assist schools and teachers to improve the development of SRL skills to enhance learners' academic achievements across all grades.

Keywords: development, learner, learning strategies, Namibian context, perspectives, self-regulated learning, social cognitive, teaching strategies, teacher

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OPSOMMING

Verskeie navorsers het gerapporteer oor die waarde en noodsaaklikheid van self-gereguleerde leer (SRL) in die onderwys, sosiale lewe en verder. Volgens Cleary en Zimmerman (2004), Zimmerman (2002) en Bandura (2006) verhoog SRL in skoolomgewings sukses in probleemoplossing, akademiese prestasie, intrinsieke motivering en taakbelang omdat self-regulerende vaardighede leerders toerus met meer positiewe sienings teenoor hul toekoms, hulle bemagtig om hul sosiale gedrag te bestuur en die ontwikkeling van lewenslange leervaardighede ondersteun. Navorsers het aangedui dat onderwysers 'n belangrike rol speel in die ontwikkeling en verbetering van SRL by leerders, hoewel baie verskillende faktore soos onbewustheid van SRL of gebrek aan pedagogiese kennis van SRL kan verhoed dat hulle SRL ten volle ontwikkel. Daarom is die rol van onderwysers in die ontwikkeling van SRL by leerders van kardinale belang.

Die hoofdoel van hierdie studie was om onderwysers se perspektiewe oor die manier waarop hulle graad 8-leerders se SRL ontwikkel te ondersoek. Die hoofdoelwitte van die studie was om die onderwysers se perspektiewe oor die konsep SRL en die waarde daarvan vir akademiese sukses te ondersoek; of onderwysers bewus is van die konsep SRL en opgelei is om die strategieë te gebruik en te implementeer; en om te bepaal watter SRL-strategieë onderwysers gebruik terwyl hulle verskillende graad 8 vakke onderrig. Vir die doel van hierdie studie is self-gereguleerde leer deur die lens van die sosiale kognitiewe teorie besigtig. Zimmerman (2000) se driefase sikliese model van SRL en die aangepaste model van Zimmerman en Moylan (2009), wat ook in Bandura se (1986) sosiale kognitiewe teorie gegrond is, het die teoretiese raamwerk van die studie gevorm. In Zimmerman se (2000) model word drie fases onderskei, naamlik die voorafdenke, prestasie en self-refleksiefases. Elkeen van die drie fases bestaan uit spesifieke prosesse en subprosesse wat die vaardighede verteenwoordig wat self-gereguleerde leerders demonstreer wanneer hulle leer en take voltooi.

‘n Kwalitatiewe navorsingsontwerp, gelei deur 'n interpretivistiese paradigma, is gebruik om onderwysers se perspektiewe oor hoe hulle graad 8-leerders se SRL ontwikkel, te ondersoek. Twee landelike sekondêre skole en veertien onderwysers is gerieflik en doelgerig gekies om aan die studie deel te neem. Semi-gestruktureerde onderhoude en leswaarnemings is uitgevoer om data in te samel. Inhoudsanalise en ‘n tematiese benadering is gebruik om die data uit semi-gestruktureerde onderhoude te analiseer en te interpreteer. Data uit die waarnemings word in narratiewe beskrywings aangebied.

Die bevindings het getoon dat al veertien deelnemers ooreenstem met die waarde van SRL om leerders se akademiese prestasie te verbeter en hulle voor te berei vir die lewe na skool. Die meeste deelnemers sien hul rolle in die ontwikkeling van SRL as fasiliteerders, gidse, mentors en

toesighouers wat aanmoedigende woorde gebruik en die leerders se vordering monitor. Alhoewel die meerderheid van die deelnemers gesê het hulle is bewus van SRL, het nie almal opleiding ontvang om SRL by leerders te ontwikkel nie.

Deelnemers se perspektiewe het aangedui dat hulle glo die sosio-ekonomiese en opvoedkundige situasies van graad 8 Namibiese leerders beïnvloed hul vermoëns en bereidwilligheid om self-gereguleerde leerders te word. Bevindinge het ook teenstrydighede tussen deelnemers se perspektiewe van SRL, soos gesien in die onderhoudsdata, en hul waargenome onderrigstrategieë om SRL te ontwikkel, onthul. Deelnemers het meer strategieë genoem wat hulle gebruik om graad 8-leerders se SRL te ontwikkel in die onderhoude as die strategieë wat die navorser in die lesse waargeneem het.

Die bevindings van die leswaarnemings dui aan dat die meeste deelnemers strategieë in verskillende mates gebruik om die volgende SVV-vaardighede van graad 8-leerders te ontwikkel, naamlik hul strategiese beplanning, doelwitstelling, motivering, selfdoeltreffendheidsopvattings, taakbelangstelling, tydsbestuursvaardighede, assesseringsvaardighede en vaardighede om saam met ander in 'n groep saam te werk.

Aanbevelings word gemaak om skole en onderwysers te help om die ontwikkeling van SRL-vaardighede te verbeter om leerders se akademiese prestasies oor alle grade te verbeter.

***Sleutelwoorde**: ontwikkeling, perspektiewe, selfgereguleerde leer, sosiale kognitiewe, ontwikkeling, onderrigstrategieë, Namibiese konteks, onderwyser, leerder, leerstrategieë*

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ACRONYMS

COPES	Conditions, Operations, Products, Evaluation and standards
CPD	Continuous Professional Development
EBSCO	Elton B. Stephens Co.
HOD	Head of Department
JSC	Junior Secondary Certificate
MBEAC	Ministry of Basic Education, Arts and Culture
NDP4	The Fourth National Development Plan
NIED	National Institute for Educational Development
NSSC	Namibia Senior Secondary Certificate
NWU	North-West University, South Africa
SACMEQ	Southern and Eastern African Consortium for Monitoring Educational Quality
SRL	Self-Regulated Learning
SSE	School Self-Evaluation
TSE	Teacher Self-Evaluation
TV	Television
UNICEF	United Nations International Children's Emergency Fund
ZPD	Zone Proximal Development

CHAPTER 1: ORIENTATION

1.1 INTRODUCTION AND BACKGROUND

Since the inauguration of the Namibian government at independence in 1990, the government assigned the Ministry of Basic Education, Arts and Culture (MBEAC) to manage and administer the education system in Namibia. The main mandate of the MEAC is to educate and train for sustainable national development goals. The MBEAC's' sustainable goals are to provide accessible, equitable and inclusive quality education to develop an open-minded, skilled, productive and competitive nation.

To ensure the attainment of the mandate and sustainable goals, the MEAC has in past years initiated and introduced programs and policies for implementation. Examples of such programs are: Vision 2030, the Fourth National Development Plan (NDP4) and the establishment of National Institute for Educational Development (NIED). Through Vision 2030 the MEAC aims to develop Namibia into a knowledge based society (Namibia Vision 2030, 2004). Matemba and Lilemba, (2015) state that Namibia's Vision 2030 is a relevant initiative of the country because, the goals of education are beyond mere learning and retention by the learner, but aims to develop learners to use the newly acquired knowledge outside the school environment. The NDP4 strives for continuous improvement in the quality of inclusive education, teaching and learning to improve the learning outcomes. Lastly, NIED oversee the development of curriculum and coordinate the professional development for teachers in Namibia.

Miranda, Amadhila, Dengeinge and Shikongo, (2011) reported that Namibian government had been paying specific attention to teachers' education reform programs and curriculum transformation by increasing the number of qualified teachers, improving access to schooling as well as the equitable distribution of educational resources. The Namibian National Broad Curriculum (2009) further illustrate that MEAC has implemented policies which requires teachers to use learner-centered teaching strategies. However, although, many Namibian school teachers are in favour of learner-centered teaching and learning strategies in their own classrooms, some teachers still prefer to practice a transmission teaching approach which results in rote memorisation and learning without understanding.

Despite of these efforts, Grossmann and Naanda (2006) and the UNICEF Report (2004) states that Namibia's education and training systems still lacks the necessary performance to address future economic, social and educational challenges successfully. In the same vein Miranda *et al*., (2011) reported in the Southern and Eastern African Consortium for Monitoring Educational Quality (SACMEQ) III project in Namibia, a study of the conditions of schooling and the quality of education, that Namibian learners performed poorly compared to learners from other countries.

For instance, in the reading category the Namibian learners were placed third from the bottom while in the Mathematics category they were placed at the very bottom. Marope (2005) warned that the Namibian general education system is too weak to effectively support national development goals namely access, equity, quality and democracy to facilitate transition to a knowledge-based economy.

Tjihenuna, (2014) and Heita, (2013) reported that despite all these efforts mentioned above, to improve the quality of education and pass rates of learners in different grades, the performance of many Namibian schools remain poor. Namupala (2013) concurs that the poor academic performance of grade 10 learners has become a matter of concern in Namibian schools. Based on the poor academic performance of Namibian learners, Katrina (2012) suggested that the government should embark on a massive campaign to improve the results in the senior secondary school phase and change people's perceptions that Namibian learners cannot perform academically better. The poor performance of learners can be improved by developing SRL in learners. SRL will help them to become proactive learners, who set goals, use learning strategies and who are aware of their strengths and limitations (Zimmerman, 2002a). The researcher believes that self-regulated learners are more motivated, can work through difficulties, can keep track of their own performance and are successful in school.

Table 1.1 below shows the achievement of learners in Junior Secondary Certificate (JSC) from 2010-2017

Table 1.1: Junior Secondary Certificate (JSC) results from 2011-2017

Year	Number of learners	Pass rate	Data source
2011	35640	51.5%	*Windhoek observer newspaper*.
2012	34 054	52.1%	
2013	34096	54.7%	*The Namibian newspaper*
2014	35 592	54.1%	
2015	37 441	54.3%	New era (2015)
2016	38 240	55.7%	Katrina, (2016:3)
2017	40 599	55.4%	Nakale, (2017)

Table 1.1 above shows grade 10 national results over a period of seven years in Namibia. Grade 10 national examination results above were used to illustrate the sequences of current Namibian educational successes and failure in JSC phase (grade 8-10).

A great part of the Namibian population lives in rural areas where many schools are geographical separated compared to schools in urban areas. Therefore the majority of the learners in Namibia are from rural schools.

Against the Namibian education background sketched above, this chapter introduces the outline of the research which investigates the perspectives of Namibian teachers' development of grade 8 learners' self-regulated learning. This chapter begins with the discussion of the problem statement and motivation of this study (§ 1.2.), explanations the preliminary review of literature (§ 1.3) and clarifies the keywords (§ 1.4). The chapter further states the research questions (§ 1.5), aims and objectives (§ 1.6) of the research study. The theoretical perspective of this research is described (§ 1.7) together with description on how the research design (§ 1.8.1) and sampling methodology (§ 1.8.2) were used in the study. The method of data collection (§ 1.9), data analysis (§ 1.10), trustworthiness (§ 1.11) along with the ethical consideration (§ 1.12) are enlightened. Lastly, the contribution to the study (§ 1.13), and the summary (§ 1.14), chapter outline (§ 1.15) are justified.

1.2 PROBLEM STATEMENT AND MOTIVATION

As a teacher at a Namibian rural school the researcher has first-hand experience of how poorly self-regulated learners and other barriers to teaching and learning cause low pass rates and drop outs. The researcher and his teaching colleagues have also noted that many learners' academic achievement drops when they progress from primary into senior secondary school. Poor performance of learners at the end of the year often results in low intake of learners the following years and schools that become disregarded by communities because of the low pass rates. Low achievement of competencies by the learners results in a state of blame among learners, parents, community members and teachers at school (Samanu, 2015). The researcher assumes that poor performance in Namibian rural schools can be attributed, amongst other factors, to teachers' incapacity to develop self-regulated learning (SRL) in learners because they still use a transmission teaching approach (The Namibian National Broad Curriculum, 2009). The researcher furthermore suspects that higher pass rates can be achieved if teachers become aware of the value of self-regulated learning and how it can be developed in grade 8 learners to help them cope with academic and other challenges.

Zimmerman (2000) defines SRL as "self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals"(p. 14). SRL describes how learners consciously regulate their cognitive strategies, metacognition, motivation and environment to attain academic goals. For SRL to occur, learners should proactively monitor their progress and regulate their thoughts, emotions, and leaning behaviour with the objective to accomplish their goals (Pintrich, 2002: 219).

Many researchers have reported on the value and necessity of SRL in education and in social life. According to Cleary and Zimmerman (2004), Zimmerman (2002) and Bandura (2006) SRL in school environments increases success in problem solving, academic achievement, intrinsic motivation and task interest since self-regulatory skills provide learners with more positive views towards their futures, empower learners to manage their social behaviour, and support the development of lifelong learning skills. Miranda et al., (2011) noted that according to the Southern and Eastern African Consortium for Monitoring Educational Quality (SACMEQ) Namibia's averages are lower than South Africa, and Mozambique in both reading and mathematics. Therefore the role of teachers in the development of SRL in learners is of vital importance.

Even though many researchers have indicated that teachers play a crucial role in developing and enhancing SRL in learners (Zimmerman 2008, 178-179; Isaacson and Fujita 2006; De-Zoysa, Chandrakumara and Rudkin 2014; Dzulkifli and Alias 2012), there are many different influences such as unawareness of SRL or lack of pedagogical knowledge of SRL which might also prevent teachers from fully developing SRL (Zimmerman, 2000).

According to Zimmerman (2002a), some learners seem to have acquired SRL skills by the time they arrive in secondary school. These learners may have obtained SRL skills at home, in primary school or from other sources. During their secondary education learners seldom receive instruction in study methods or self-regulatory skills and those who have not mastered them yet often experience academic problems (Zimmerman, 2002a). The researcher is of the opinion that if the Namibian schools and teachers do not play an active role in the development of SRL skills, many of these learners will fail and not complete their secondary education. Simanu (2015) adds that the quality of the teaching and learning in Namibian schools is not of good quality as it does not satisfy parents and the MEAC's expectations and goals. The reason being that majority of the learners perform below average.

In primary school, teachers are very involved in learners and their development. They set goals for learners, manage the time they spend on completing tasks, boost their self-confidence and praise them when they reach expectations. As learners advance to higher grades, that support and development is decreased and teachers expect learners to master and integrate self-regulation skills on their own (Ramdass & Zimmerman, 2011). Woolfolk (2013) states that a very important goal of teaching is to prepare learners for lifelong learning. In order to become lifelong learners it is necessary for learners to be self-regulated, motivated knowledgeable and willing to learn.

The problem researched was whether the grade 8 teachers understand the concept SRL and whether they adapt their teaching approaches and learning environments to develop SRL in their learners so that learners learn how to identify learning goals, to plan and set meaningful tasks, to

use required learning strategies, to sustain their own motivation and resources to attain academic success in school and beyond. Grade 8 teachers were selected since grade 8 is the first grade in secondary school and learners at this stage do not have subject choices. The researcher assumed it would be interesting to explore how self-regulated learning is developed across different subjects in grade 8.

Little is known in the Namibian context about the extent to which secondary school teachers understand, practise and construct SRL in their teaching and in the development of their learners. Therefore the teachers' beliefs are valuable from a theoretical as well as an applied perspective. Insights into teachers' perspectives about SRL can provide information that elucidates the occurrence or absence of SRL practices in Namibian schools.

In the next section keywords and concepts used in this study will be defined.

1.3 KEYWORDS AND CLARIFICATION

This section deals with the clarification of the keywords used in this research study. Keyword clarification is significant as it gives a clear descriptive on how the words are used by the researcher to interpret the main concepts in this study.

1.3.1 Teacher

A teacher is a "person who provides education to learners" (Oxford Advanced Learner's Dictionary, 2010, p. 1533). The Namibian Education Act, 16 (2001) defines a teacher in state schools as a "staff member who is professionally qualified to teach others in formal education, and whose occupation is teaching" (p. 9). In this study a teacher refers to a qualified professional who takes steps to develop learners to become knowledgeable and skilled. A teacher in this respect is employed by MBEAC and teaching at a state school in rural area of Namibia.

1.3.2 Learner

Learner is a "person who is finding out about something or is learning how to do something" (Oxford Advanced Learner's Dictionary, 2010, p. 846). A learner in the Namibian context is any person who is registered and receiving basic education or a course of study in terms of the (Namibian Education Act, 16 of 2001). This would include "any person who is attending school formally or informally in Namibia and is receiving basic education from grade 0 (zero) to grade 12 is described as a learner in Namibia" (Namibian Education Act, 16 of 2001, p. 7). In this study a learner is viewed as a person who is able to develop skills to organise, regulate and evaluate his or her own learning in order to acquire and apply new knowledge and skills (setting goals or targets, planning, using time more efficiently).

1.3.3 Self-Regulated Learning (SRL)

SRL is generally defined as “self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals” (Zimmerman, 2000, p. 14). Self-regulated learning describes how learners consciously regulate their cognitive strategies, metacognition, motivation and environment, and for SRL to happen the learner should proactively monitor, regulate and monitor their thoughts, feelings, and behaviour with the objective to accomplish their goals (Pintrich, 2002). For the purpose of this research study SRL is viewed as the ability of a learner to take responsibility for his/her own learning, using various strategies.

1.3.4 Development

Development is a “change and advancement in attitudes, values and skills” (Van der Westhuizen, 2013, p. 2). Development in terms of self-regulation means a planned and systematic process that takes place in the learners so they could have the capabilities to regulate themselves. In this research, development is also viewed as strategies taken by teachers to develop SRL in learners. In this study development is discussed in the context of developing self-regulated learning skills. Zimmerman (2000:13) states that learners’ SRL is developed through different developmental stages: observation, emulation, self-control and self-regulation.

1.3.5 Learning strategies

Learning strategies are “well-planned series of actions for achieving aims” (Longman Dictionary Contemporary English, 1995, p. 1426). Learning strategies in the context of this study can be defined as behaviours and thoughts that learners engage prior to, during or after the performance of a learning task. These learning strategies are aimed at facilitating and informing processes and integrating new and existing information.

1.3.6 Teaching strategies

The teaching strategies refer to well-structured sequences of activities during lesson presentation: these include direct questioning, eliciting, explaining, demonstrating and challenging the learners’ ideas, checking for understanding, helping and supporting, providing for active practice and problem solving and other methods or strategies that include co-operative and collaborative learning (The National Curriculum for Basic Education, 2009).

1.3.7 Teachers’ roles

Teachers’ roles refer to “different parts teachers have to play, or functions they have to perform as facilitators of learning” (Jacob, Valiksa and Gawe, 2011, p. 23). In this research study the role of a teacher is related to what activities teachers do in the development of SRL of grade 8 learners.

1.3.8 Perspectives

Perspective is a particular attitude toward something or a way of thinking about something (Oxford advanced learner's dictionary, 2010:1094). According to Oolbekkink-Marchand, Van Driel and Verlop (2006) the term perspective is viewed as "specific meanings attached to phenomena which then mediate our response to situation involving those phenomena" (p. 22). Therefore in this study, perspectives will be viewed as ways in which teachers perceive SRL in terms of their views, opinions, conceptions, beliefs, interpretations, actions, and intentions on how to development of SRL.

1.3.9 Social cognitive

Bembenutty et al. (2015) defines social cognitive as the importance of human agency and provides the framework to study how learners acquire capabilities, skills, personalities, beliefs and guidelines. The social cognitive theory expanded on the social learning theory by including cognitive factors such as beliefs, expectations, and perceptions of self. Social cognitive theory in this studies is viewed in SRL as a human functioning is the product of self-motivation through interaction, in sequences of mutual interactions between the personal, environmental and behaviour determinants in accordance with Zimmerman (1989).

The next section gives a brief conceptual-theoretical framework of the study.

1.4 CONCEPTUAL-THEORETICAL FRAMEWORK

An extended literature review was conducted which is discussed in depth in Chapter 2 (§ 2.2) to find relevant literature about the problem being investigated on the perspectives of teachers' development of grade 8 learners' SRL. The following resources were used: journals, electronic resources, including EBSCO host, Scopus, Eric database and the Internet. Primary and secondary sources were used as well as national and international literature and documents from MBEAC that provided information to ensure the accomplishment of this research.

According to Kaplan (2008) and Loyens, Magda and Rikers (2008) researchers diverge in conceptual clarity about the definitions of metacognition, self-regulation and self-directed learning. At times these concepts are used interchangeably, and at other times they are regarded hierarchically with self-directed learning as the umbrella concept and self-regulated learning and metacognition as underlying concepts required to achieve self-directed learning (Dinsmore, Alexander, & Loughlin, 2008; Schunk, 2008 cited in Barzilai & Zohar, 2014).

SRL originates from cognitive psychology and is viewed as a micro level construct practised primarily in formal school environments where tasks and goals are usually set by teachers

(Kaplan, 2008). SRL can be viewed from numerous perspectives based upon educational philosophy, such as the behavioristic, phenomenological, Vygotskian, cognitive construct and social-cognitive perspectives. In this study SRL is viewed from the social cognitive perspective (Zimmerman 2002b).

Zimmerman, (2001) argues that every theoretical perspective of SRL can be evaluated by asking five questions, namely:

> What motivates learners to be self-regulated? Through which processes or procedures do learners become or aware of their self-regulation? Which processes do learners use to achieve academic goals? How do the social and physical environments influence self-regulated learning? How do learners' SRL develop while they are learning? (p. 8).

The researcher in this study argues that when it comes to the roles of teachers in the development of SRL, the same questions can be asked: What do teachers do to motivate learners to be self-regulated? Through which processes or procedures do they make learners become aware of their self-regulation? Which processes do teachers use to help learners to achieve academic goals? How do teachers adapt the social and physical class environment to influence self-regulated learning? How do they monitor learners' SRL development?

Self-regulated learning furthermore refers to the proactive, cyclical processes in which a person is metacognitively, socially, motivationally and behaviourally active in his or her own problem-solving processes to attain academic success and general functioning in life (Zimmerman, 1989; Zimmerman, 2000). These processes include using self-observation, self-judgment, and self-reaction to attend to information; planning and managing time; processing, integrating and organising knowledge; invoking metacognitive skills to code and rehearse information to be remembered. Motivation processes include maintaining an optimistic sense of self-efficacy; creating a useful work environment; employing social resources efficiently and having a positive outcome expectation of learning new information (Zimmerman, 1989; Zimmerman, 2000; Boekaerts & Corno, 2005).

Zimmerman (2000) distinguishes three phases in his model of SRL. Phase one is the forethought phase which occurs when learners prepare for performance. Phase two, performance or volitional control, involves all processes performed during learning; and the third phase of self-reflection takes place when students evaluate their performance against the goal and make adjustments to their applied strategies as deemed necessary (Zimmerman 2008). This model of Zimmerman (2000) was relevant for exploring teachers' use of SRL strategies in developing learners' use of SRL strategies to improve academic success, as learners have to exercise personal agency in

applying the processes in three phases and benchmarking their academic goals to evaluate their learning

Zimmerman, (2002a) states that “self-regulated learners are proactive in their efforts to learn because they are aware of their strengths and limitations and because they are guided by personally set goals and task-related strategies” (p. 65). The author further argues that although teachers know learners’ strengths and limitations in learning, their goal should be to empower their learners to become self-aware of their strengths and limitations (Zimmerman, 2002a).

Teachers are vital agents of change in the current reform in education and are thus expected to play a key role in transforming schools and preparing learners for life skills needed in the twenty first century. Ironically, teachers sometimes resist change and innovation, because of their persistent use of old-fashioned forms of teaching that emphasize factual and procedural knowledge at the expense of self-regulated learning. Lombaerts, De Backer, Engels, van Braak & Athanasou, (2009) note that teacher beliefs have a significant role in understanding their classroom practices and argue that “their beliefs can be seen as a blueprint for what they will promote, inhibit and resist”. They can create a collective climate at schools that can foster or inhibit innovation (such as self-regulated teaching and learning). Thus, to change teaching practices, teachers’ beliefs should be considered (Lombaerts et al. 2009).

The following section discusses the research questions in terms of the primary and secondary research question.

1.5 RESEARCH QUESTIONS

The primary research question of this study is shown below:

How do teachers develop SRL of grade 8 learners?

In order to investigate and ensure that primary question was explored the researcher decided to spit the main research question into sub-research questions as follows:

- What are teachers’ perspectives about the concept SRL and its value for academic success?
- Are teachers aware of SRL and were they trained to use and implement self-regulated learning strategies?
- Which self-regulated learning strategies do teachers use while teaching different grade 8 subjects?

1.6 PURPOSE OF THE STUDY

The purpose of this study was to explore teachers' perspectives of how they develop grade 8 learners SRL. The researcher developed the following objectives as taken from the purpose of this study.

- To determine teachers' perspectives about the concept SRL and its value for academic success.
- To determine whether teachers are aware of the concept SRL and trained to use and implement SRL strategies.
- To determine which SRL strategies teachers use while teaching different grade 8 subjects.

1.7 RESEARCH DESIGN AND METHODOLOGY

This study is located within an interpretivist philosophical orientation. The interpretive philosophical orientation in qualitative research is concerned with meaning and it seeks to understand social members' definitions of their understanding of situations to provide insight into different ways in which a particular group of people make sense of their situation or phenomena they encounter (Maree, 2007). In this research study the researcher explored the perceptions of teachers regarding SRL. Keeping in mind the interpretive perspectives, the researcher strived towards a comprehensive (holistic) understanding of how the teachers (participants) relate and interact when developing self-regulation of grade 8 learners. Therefore the use of a case study to explore the research questions was necessary.

A broader description of the research design and methodology is given in chapter 3.

1.7.1 Research design

A qualitative research approach was used in this research study. According to Maree (2007 p.50) "a qualitative research approach attempts to collect rich descriptive data in respect of a particular phenomenon or context with the intention of developing an understanding of what is being observed". Creswell (2002) and Maree (2007) further describe a qualitative research approach as one in which the inquirer often makes knowledge claims based primarily on construct perspectives (i.e. the multiple meanings of individual experiences and meanings socially and historically constructed, with an intent of developing a theory or pattern). A qualitative research approach also uses strategies of inquiry or research designs such as narratives, phenomenologies, ethnographies, grounded theory studies, or case studies. Researchers use these designs, to collect open-ended, emerging data with the primary intent of developing themes from the data. The researcher decided to use a qualitative research approach based on the

philosophical assumptions and the potential it offers for teachers' individual experiences and meanings of SRL and its development in learners.

Johnson and Christensen (2004) view a research design as an outline, plan or strategy one intends to use to seek an answer to one's research problem; it should focus on the end-product, the kind of study being planned and the kind of results aimed at.

The researcher used a case study research design to explore the teachers' perceptions of how they develop grade 8 learners SRL. A detailed description and explanation of a case study is discussed in chapter 3 (§ 3.5).

1.7.2 Researchers' roles

Maree (2016) states that a "researcher should enter into a collaborative partnership with the research participants in order to collect and analyse data" (p. 44) to create understanding about the phenomenon which is investigated. The researcher plays a major role while conducting research because the whole process carried out in a research study begins and ends with the researcher. Therefore the researcher in this study acted as an observer when conducting the classroom observations and recording the interviews with the participants. The researcher was aware that the success of this study depended on him, therefore he made sure that participants were kept motivated throughout the research by explaining the purpose of the research as well as interacting with the participants.

Joubert (2005) (cited by Maree, 2016) lists the following roles of researchers applicable to this research:

Assisting and compiling the questionnaire. After a thorough literature study the researcher compiled a questionnaire and observation schedule. *Preparing and structuring interviews and observation schedules.* In this study the researcher prepared the interview and observation schedules before collecting data. *Conducting interviews.* In this study the researcher conducted semi-structured interviews with all 14 participants. *Conducting classroom observation.* In this study the researcher observed all 14 teachers in their classroom while teaching. *Analysing data.* In this study the data analysis process was carried out by the researcher. *Triangulating the data:* The researcher triangulated data form participant interviews with data from their lesson observations.

In the next paragraphs the researcher will highlight the sampling method used as well as the other different sampling methods.

1.7.3 Sampling methods

Sampling refers to “a process used to select a portion of the population for study” (Maree, 2007, p. 79). The two major types of sampling in qualitative research are probability and non-probability sampling. Probability sampling refers to methods of sampling based on a principle of randomness (Maree 2016). Non-probability sampling involves the following types of sampling: convenience, quota, snowball and purposive sampling. Quota sampling is used when at first the population is identified into categories as sample and use of numbers is applied. Snowball sampling is applied in researches where the population is difficult to find.

This research used a sample of 14 grade 8 teachers to explore teachers’ perspectives about SRL and its value for academic success as well as how they develop SRL of grade 8 learners. This study used convenience sampling and purposive sampling. Mertens (2010) explains that convenience sampling means that the participants in the study will be chosen because they are readily available. Convenience sampling was used because the schools that were chosen as research sites are easily accessible to the researcher, and participants are conveniently available.

Maree (2007) defines purposive sampling as a “method that is used in special situations where the sampling is done with a specific purpose in mind” (p. 178). The grade 8 teachers were purposively invited because the researcher was interested to explore their views of SRL and the strategies they use to develop SRL in the learners. Therefore the teachers would be able to provide valuable data to answer the research questions. Purposive sampling allowed the researcher to select 14 participants according to specific criteria for example:

- Participants must be qualified teachers.
- Participants at each school must be teaching different subjects in the grade 8 curriculum. This allowed the researcher to find out how teachers develop SRL to grade 8 learners in their different subjects.
- Participants must be staff from the two selected schools.

The participants in this study met the selection criteria. They were all qualified staff members of two rural combined secondary schools within Bukalo circuit in Zambezi region. The participants were trained and experienced subject specialists, teaching subjects in grade 8. The participants were teaching either promotional or non-promotional subjects. Promotional subjects includes English second language, Silozi second language, Mathematics, History, Geography, Life Science, Physical Science, Computer Studies, Entrepreneurship, Accounting, and Agriculture. Non-promotion subjects are subjects such as Religious and Moral Education, Basic Information Science, Information Technology and Physical Education.

1.8 METHOD OF DATA COLLECTION

Maree (2007) and Creswell (2009) state that a key strength of a case study as research design is the use of extensive, multiple sources and techniques in the data gathering. The researcher determines in advance what evidence to gather and what analysis techniques to use with the data to answer the research question. Data collection instruments in qualitative research can include "interviews, documentation reviews, observation and even collection of physical artefacts" (Creswell 2009, p. 75). The data collection techniques or methods used in this research study include lesson observations and semi-structured interviews with the 14 participants.

1.8.1 Observations

Observation is a systematic process of recording the behavioural pattern of participants, objects and occurrences without necessarily questioning them or communicating with them (Maree, 2007). Observations was used because the researcher wanted to get deep insight and understanding of the perspectives of Namibian teachers' development of grade 8 learners' SRL.

In this study, lesson observations was conducted first to prevent social desirability (Maree, 2007). If semi-structured interviews were conducted before the observations, it could result in participants purposefully changing their teaching to adopt self-regulated strategies and that would make their lesson observation less valid for the research. One lesson of each participant was observed before the semi-structured interviews was conducted. The observation was done to determine participants' use of strategies to develop SRL. The researcher used the observation schedule to record when SRL behaviour or a SRL strategy occurred in the teaching and learning of grade 8 teachers. The observation schedule consisted of self-regulated learning strategies, based on Zimmerman's (2000) model for self-regulated learning.

Observations focused on participants' direct and indirect SRL strategy use, such as metacognitive strategies, planning, task analysis, learning strategies, use of various resources and reflection in their teaching. The SRL strategies which were pre-coded were supplemented by the observation notes which the observer observed during the classroom observations to supplement the observation schedules. The observation schedule used the following ratings: the lowest rating - Never observable (NO); Rarely observable (RO); Often observable (OB), and Mainly observable (MO) as the highest rating.

The advantages of using observations as a data collecting method includes the following: Observations provided the researcher with ways to check for nonverbal expression of feelings, determine who interacts with whom, grasp how participants communicate with one another, and check how much time was spent on various activities. Participant observation was a method to develop a holistic understanding of the phenomena (SRL) under study, as objective and accurate

as possible, given the limitations of the method (Maree, 2007). Each lesson observation lasted about 40 minutes.

1.8.2 Semi-structured interviews

An interview is a “two way conversation in which the interviewer asks the participant questions to collect data and learn about the ideas, beliefs, views, opinions and behaviours of the participants” (Maree, 2007, p. 87).

Interviews were believed to provide a deeper understanding of social phenomena than would be obtained from purely quantitative methods, such as questionnaires. Interviews are most appropriate where little is known about the study phenomenon or where detailed insights are required from individual participants (for example, few studies have focused on the teachers’ perspectives in developing self-regulated learning of grade 8 learners).

Semi-structured interviews were conducted after the lesson observations and lasted between 20 to 35 minutes. The semi-structured interviews were conducted in the afternoons or evenings when participants were free from teaching duties and other disturbances. Suitable times and dates for the interviews were arranged with participants. The researcher requested from participants to voice record the semi-structured interviews.

The semi-structured interviews provided clarity about issues that had been observed in lesson presentations and gave more in-depth understanding of participants’ perspectives on the value of SRL for academic success, their familiarity with the concept SRL, their training to develop SRL and the strategies they use to develop SRL in the grade 8 learners.

After the data had been collected it was essential for the researcher to deploy the methods of data analysis in order to reveal the findings. In the following section data analysis will be discussed.

1.9 METHOD OF DATA ANALYSIS

Mouton (2001) defines data analysis as a “breaking up” (p. 108) of the data into manageable themes, patterns, trends and relationships. He further emphasizes that the aim of data analysis is to understand the various constitutive elements of one's data through an inspection of the relationships between concepts, constructs or variables. Data analysis is done to see whether there are any patterns or trends that can be identified or isolated, or to establish themes in the data. Interpretation involves the synthesis of one's data into larger coherent wholes by relating one's results and findings to existing theoretical frameworks or models, and showing whether these were supported or falsified by the new interpretation. According to Maree (2007),

interpretation involves stating the large meaning of the findings and personal reflections about the lesson learned in the research.

1.9.1. Analysis of semi-structured interviews

During the data analysis, process content analysis was used which follows a thematic approach. The researcher started by transcribing the 14 semi-structured interviews. The semi-structured interviews were transcribed to generate a clear understanding of the participant responses with regard to their perspectives about the concept self-regulated learning and the development of SRL in grade 8 learners. The researcher's intention was to analyse the content, attitudes, understanding, knowledge, values, feelings and experiences of participants.

After the transcription of the semi-structured interviews the researcher started with the coding process. Maree (2007) defines coding as a “process of reading carefully through your transcribed data, line by line, and dividing it into meaningful analytical units” (p. 105). Coding enabled the researcher to quickly obtain or retrieve and gather the whole text and other information related to the thematic idea which was being sorted and examined and compared. Categories of information were noted and identified, and subsequently the collected data were examined for contradictions, similarities, relationships. Maree (2007) suggests that with data analysis researchers pay attention to elements such as noticing, collecting and reflecting on the information that has been given by the participants.

In this study *a priori* codes from literature were used to categorise responses referring to participants: understanding of the concept SRL, its value for academic success, and strategies participants use to develop SRL in their grade 8 learners (Saldana, 2009). Seeing that the theoretical framework in the study is based on Zimmerman’s (2000) SRL model, the researcher decided to use the three phases in Zimmerman’s (2000) model as themes, namely the forethought, volition and self-reflection phases. Participants’ responses were coded under the processes and subprocesses of each phase, for example goal setting, task analysis, task strategies, planning, etc.

1.9.2. Analysis of lesson observations

The researcher developed an analysis data form to code the observations. Data collected through observations were coded into categories such as lower demonstration of SRL development and average demonstration of SRL development. The lesson observation schedule was supplemented by observation notes during class visits.

In the next paragraph, the researcher will discuss what strategies were used in order to ensure the trustworthiness of this study.

1.10 TRUSTWORTHINESS

In this research trustworthiness was enhanced by the researcher through using multiple data collection methods such as lesson observation and semi-structured interviews. The following strategies were used to ensure trustworthiness in this research (McMillan and Schumacher, 2001):

Sufficient opportunities were provided for participants to contribute to the study (through interviews whereby participants were asked questions). The research was conducted in a natural setting of the schools where each participants taught to prevent an artificial setting in order to promote the reality of the participant's real life experiences their everyday teaching. In the discussion of findings verbatim quotes of participants were provided as substantiation of conclusions made by the researcher. An audio recording instrument was used to record data collection through interviews. The researcher was also aware of his own assumptions and biases relating to data collection and data analysis. The aim of the research as well as its role in the study were explained to participants. The researcher used multiple data collection methods (observations and interview). Participants were consulted to determine specific dates and times for semi-structured interviews and lesson observations. Triangulation by means of more than one data collection method was used to ensure the researcher of the findings of the study. The purpose of the triangulation was to obtain different, but complementary data in the same study to best understand the research problem. Member checking was done to ensure the accuracy of transcriptions and interpretations of data. The participants were granted an opportunity to review the researcher's report. Multiple codes were used with the data analysis. Experienced, knowledgeable researchers at the North West University were requested to verify the data analysis to ensure consistency among different coders.

1.11 ETHICAL ASPECTS

Ethical issues or ethics are the "norms for conduct that distinguish between acceptable and unacceptable behaviour, and could be defined as the rules for distinguishing between right and wrong" (McMillan & Schumacher, 2001, p. 182). Ethical issues considers among others, honesty, objectivity, integrity, carefulness, openness, confidentiality, and respect for colleagues, social responsibility, legality and human subjects' protection.

The following measures were taken into account with the planning and conducting of the research to ensure that the rights and welfare of each participant were protected (Fraenkel, Wallen & Hyun, 2012; McMillan & Schumacher, 2001; Maree, 2007):

Ethical clearance was requested from the Ethics Committee of the Faculty of Education Sciences of the North West University, Potchefstroom Campus. The following ethical code was issued by

the ethics committee as confirmation of approval (NWU-00184-16-A2). Permission to conduct the research was obtained from the Namibian Ministry of Education and the principals of the two schools. Participants were asked to participate voluntarily in semi-structured interviews and lesson observations. The participants were first issued with a letter from the Ethics Committee of the Faculty of Education Sciences of the North-West University, Potchefstroom Campus and the aim of the study was explained. Informed consent was obtained from all participants with the understanding that their confidentiality would be respected. Participants were also be informed that they had the right to withdraw at any stage in the research (Maree, 2007).

Written permission was obtained from participants to voice record interviews. The researcher monitored the data collected to ensure the safety of the participants. This included ethical issues of privacy, confidentiality and anonymity whereby the researcher ensured that any and all information obtained during the research study was not revealed to any individual who was not part of the research. The names of participants and schools were not and will not be revealed in the results and findings of the study. This was done to ensure privacy, confidentiality and anonymity. All data will be kept safe according to the NWU policy.

1.12 CONTRIBUTIONS OF THE STUDY

This study contributed to the understanding of the role of teachers in the development of grade 8 learners' self-regulated learning. The dearth in research regarding the development of self-regulated learning abilities of Namibian grade 8 learners necessitated this research. Firstly, the study provided data on the perspectives of teachers regarding the value of self-regulated learning. Secondly the study revealed how teachers were directly and indirectly developing SRL in grade 8 learners. Thirdly, the study was able to identify the factors that might positively and negatively impact on the development of SRL in grade 8 learners.

Lastly, findings from the research may stimulate discussions with teachers about the concept, importance and usefulness of SRL and teaching to improve academic performance. Findings from this research will serve as an instrument for reflection for teachers on SRL and offer some ideas or opportunities for teachers to adapt to SRL teaching and learning strategies in educating learners for a higher attainment of educational goals. The insight into teachers' own beliefs about SRL and teaching for SRL gives priority to the development of such practices in their classrooms. Contextual constraints were identified.

1.13 SUMMARY

The aim of this chapter was twofold, firstly to substantiate the need for this research and secondly it narrated the research methodology used in this research. The first part of this chapter, namely the introduction and background, created an awareness of the Namibian education context. This was then followed by the problem statement and motivation of the research as well as the preliminary review of literature. The research questions and aims of the research give clarity on the directions of the research.

The second part of this chapter covered the research design and methodology used in the study. The research design is located within an interpretivist paradigm and case study, a qualitative phenomenological design. A further indication was given in this chapter on the sampling method deployed during the research study which included purposive sampling method. The methods of data collection (observation and semi structured interviews) were elaborated on to explain how they were significant to this research.

Lastly, the issues of trustworthiness and the ethical consideration were brought to light, and the contribution of the study was pointed out. The next chapter (§ Chapter 2) deals with the literature review which holds the account of this research probabilities in terms of what other researchers have already researched on the same topic.

1.14 CHAPTER OUTLINE

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

CHAPTER 2: LITERATURE REVIEW OF SELF-REGULATED LEARNING

2.1 INTRODUCTION

The aim of this study was to explore how teachers develop SRL of grade 8 learners in two rural schools in Namibia. SRL is viewed as a "directive process by which a learner transforms the mental abilities into achieving skills" (Zimmerman, 2002, p. 65). According to Zimmerman (1990), learners who are self-regulated are systematic and take control of their own learning processes through accepting their responsibilities for their own achievement outcomes. Therefore, self-regulated learners make choices about study methods they want to use, are aware of the learning outcomes they want to attain and create conducive social and physical settings for their learning environment (Schunk, 2012). SRL is also viewed as a process of transforming learners' intelligence into academic skills whereby learners are able to select, monitor, guide and control their own learning activities (Olakanmi, Scanlon, Blake & Jones, 2010). Zumbrunn, Tadlock & Roberts (2011) (citing Järvelä & Järvenoja, 2011; Zimmerman, 2008; Wolters, 2011; Harris, Friedlander, Sadler, Frizzelle & Graham, 2005; De Bruin, Thiede & Camp, 2011) add that SRL is important for the learning processes of learners as it "helps to create" good learning behaviours, "strengthen[s] their study skills" (p. 4) and "learning strategies to enhance academic outcomes" by "monitoring and evaluating the academic progress" (p. 4).

Researchers have indicated that teachers play a crucial role in developing and enhancing of SRL in learners (Zimmerman 2008; De Zoysa, Chandrakumara & Rudkin 2014; Dzulkifli & Alias 2012), although many different factors such as unawareness of SRL or lack of pedagogical knowledge of SRL might prevent them from fully developing SRL (Zimmerman, 2000). For example, although many teachers were in favour of learner centred teaching and developing learning strategies in their own classrooms, some teachers still prefer to practise a transmission or "talk and chalk" teaching approach which results in learners' memorising content without understanding. Teachers' unawareness of SRL are often caused by their initial teacher training where they were never prepared to developed SRL or to use SRL in their own learning and teaching. On the other hand, some teachers might even unknowingly develop SRL directly or indirectly in their learners.

This chapter defines SRL (§2.2) and different theoretical perspectives of SRL (§2.3) such as: the behaviourist or operant perspectives of SRL (§2.3.1), phenomenological perspectives of SRL (§2.3.2), information processing perspectives of SRL (§2.3.3), volitional perspectives of SRL (§2.3.4), cognitive construct perspectives of SRL (§2.3.5), Vygotskian (§2.3.6) and the social cognitive perspectives of SRL (§2.3.7). Furthermore, this chapter explores the models of SRL (§2.4). The models of SRL viewed in this chapter are Boekaerts' adaptable learning model (§2.4.1), Borkowskis' process-oriented model of metacognition (§2.4.2), Pintrich's general

framework (§2.4.3), Winne's four-stage model (§2.4.4), and Zimmerman's three phase model (§2.4.5). A comparison between the different models (§2.5) are presented in this chapter. Moreover, the chapter offers a critical exploration on the roles of teachers in the development of SRL (2.6), the importance of teachers' support to develop SRL (§2.7), the teachers' acceptance of their roles to develop SRL (§2.8), direct and indirect development of SRL (§2.9) and strategies teachers can use to develop and enhance learners' SRL (§2.10) as well as the summary of the chapter (§2.11).

The following paragraph presents the definitions of SRL from different authors or scholars.

2.2 DEFINITIONS OF SRL

Many researchers such as Zimmerman (1990, 2000, 2002), Schunk (2012), Aguilar (2010), Bruning, Schraw and Norby (2011), Moseki and Schulze (2010), Nico and Macfarlane-Dick (2005), Pintrich (2002), Cleary and Zimmerman (2004), Olakanmi, Scanlon Blake and Jones (2010), Pintrich and Groot (1990) have defined the term self-regulation in terms of academic achievement of learners. In literature different definitions of self-regulated are found, based on the theoretical and philosophical orientations of the researchers. In the next paragraphs a few definitions of SRL will be highlighted and discussed.

Zimmerman (2000), Schunk (2012) and Aguilar (2010) view SRL from a social cognitive perspective and define it as self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals or actions to modify knowledge structures in order to meet adaptive goals.

Moseki and Schulze (2010) also view SRL from a social cognitive perspective and state that self-regulated learners "integrate metacognitive processes such as: planning, setting goals, self-monitoring, self-evaluation and self-organisation in their own learning" (p. 358). Self-regulated learners also incorporate motivational processes when they are intrinsically interested in an activity. They take responsibility for their successes and failures, and possess high self-efficacy beliefs which all lead to greater effort and determination to successfully complete learning tasks. (Hadwin & Oshige, 2011).

Learners can show behavioural processes when they self-instruct, self-reinforce, create an ideal learning environment and seek out help and advice to attain optimum level of achievement. Through the metacognitive and motivational process as well as behaviour the learners become strategic in guiding their own learning

SRL describes how learners consciously regulate their cognitive strategies, metacognition, motivation and environment. For SRL to occur, learners should "proactively monitor and regulate

their thoughts, feelings, and behaviour with the objective to accomplish their goals" (Pintrich, 2002, p. 220; Zimmerman, 2002, p. 65). Self-regulation involves an "active, constructive process whereby learners set goals for their learning and then take attempts to monitor, regulate, and control their cognition, motivation, and behaviour, guided and constrained by their goals and the contextual features in the environment" (Pintrich, 2000, p. 453).

Pintrich and Groot (1990) view SRL from a social cognitive perspective and define SRL as "learners' efforts to manage their learning process to achieve goals and involve three components such as metacognitive strategies of planning, monitoring and modifying their cognitive learning" (p. 33).

Moseki and Schulze (2010) describe a self-regulated learner from a social cognitive perspective as "proactive because they set clear, specific and realistic goals beforehand and consistently self-monitor and evaluate their progress" (p. 358). Moseki and Schulze (2010) further say that self-regulation involves "participants' cyclical processes of learning such as setting of clear, specific and realistic goals, self-monitoring and self-evaluation" (p. 358). Therefore SRL involves the learners' ability to control and alter change of their capabilities into learning achievements as well as the learners' choice to engage and participate in learning activities.

Boekaerts (1999) further opines that SRL (from a cognitive perspective) includes the "learners' ability to select, combine, and coordinate cognitive strategies in an active way" (p. 447). SRL therefore involves the metacognitive methods such as planning, goal-setting, self-monitoring, and self-evaluating in order to strive for academic achievements.

Bruning, Schraw and Norby (2011) regard SRL from a social cognitive perspective and define self-regulation as the ability of learners to control all aspect of their learning by planning and evaluating their performance towards achievements.

Nicol and Macfarlane-Dick, (2005) define SRL as the state in which learners can regulate aspects of thinking, motivation and behaviour during learning. SRL manifested in the active monitoring and regulation of a number of different processes such as the setting of, and orientation towards, learning goals; the strategies used to achieve goals; the management of resources; the effort exerted; reaction to external feedback, and the product produced (Nicol and Macfarlane-Dick (2005).

In summary, considering the different definitions of SRL above, SRL could be viewed as a systematic process of learning that involves planning; the setting of clear, specific and realistic goals; the use of metacognitive awareness; task strategies and motivational control; abilities to apply self-control; self-monitoring and self-evaluation in order to transform or change mental capabilities into achievement.

2.3 THEORETICAL PERSPECTIVES OF SRL

SRL can be described and interpreted from various theoretical orientations, based on the perspective of the researcher. As already mentioned, the most prominent theoretical perspectives of SRL include behaviourist or operant, phenomenological, information processing, volitional or performance, Vygotskian, and social cognitive construct perspectives (Zimmerman, 2001; Nilson, 2013; Bramucci, 2013). After the description of the aforementioned theoretical perspectives, the similarities and differences in the different theoretical perspectives of SRL will be highlighted. The theoretical view of SRL explains the ways in which learners learn by themselves and what was needed for a learner to independently know oneself in order to achieve academic tasks (Moseki & Schulze, 2010).

Most of the researchers in various theoretical perspectives regarding self-regulation has focused on five (5) basic issues or questions: (i). What motivates learners to self-regulate during learning? (ii). What procedures do learners use to become self-responsive or aware? (iii). What are the key processes or responses which self-regulated learners perform in order to achieve their academic objectives? (iv). How does social and physical environment influence learners' self-regulation? (v) How do learners acquire self-regulation learning capacity or abilities during learning? (Bembenutty *et al.*, 2015, Woolfolk, 2013, Bramucci, 2013, and Zimmerman, 2001).

The following paragraph defines and discusses the different theoretical perspectives of SRL. For the purpose of this study, the social cognitive view of SRL will be discussed in more detail than the other views, since it was the theoretical framework on which this study was based. The Behaviourist theory or operant theory of SRL will be discussed next and thereafter the other theoretical perspectives of SRL.

2.3.1 Behaviourist theory or Operant theory of SRL

Schunk (2012) explains that the behaviourist perspective on self-regulation derives largely from the work of Skinner (2002). The framework of his operant conditioning theories applies operant principles in diverse setting with adults and children. The behaviourist theory depicts and favours overt descriptions of this theory such as self-instruction, self-recording, self-reinforcement. Operant theory maintains that internal reward or punishment and also social approval determine learners' choices to become self-regulated or not (Nodoushan, 2012). According to this theory, modelling by and reinforcement from teachers in learners' social and physical environments play a role in the shaping of learners to become self-regulated (Zimmerman, 2001). Shaping a learner involves the use of reinforcement in learning processes until learners have achieved or attained their set learning goals. This theory of SRL posits learners must learn to make choices between actions to gain for rewards they want. In order to become self-regulated learners must be taught

self-control, not to be impulsive and to be committed to their goals. Self-control and commitment will result in better rewards to be achieved at a later stage.

The behavioural theory of SRL emphasizes the sub-processes self-monitoring, self-instruction, and self-reinforcement as mechanisms to develop SRL. Self-monitoring refers to “deliberate attention to some aspect of one’s behaviour and often is accompanied by recording its frequency or intensity” (Schunk, 2012, p 401). The behaviours can be measured based on the quality, frequency, quantity and the originality. Schunk argues that learners must be taught one or more self-monitoring methods such as “narrations, frequency counts, duration measures, time-sampling measure, behaviour rating, and behaviour traces and archival records” (Schunk, 2012, p. 402). Narrations are written accounts of behaviours and the content in which they occur; frequency count was used to self-record instances of specific behaviours during a given period; duration measure records the amount of time a behaviour occur during a given period; time-sampling measures divide a period into shorter intervals and record how often behaviour occurs during each interval; behaviour rating require estimates of how often a behaviour occur during a given time; behaviour traces and archival records are permanent records that exist independently of other assessment (Schunk, 2012).

Self-monitoring makes learners aware of existing behaviours and assists them in evaluating and improving those behaviours (Schunk, 2012). Learners can use and control self-monitoring behaviours by using regularity (consistency) monitoring and proximity (closeness) monitoring. Regularity monitoring requires a learner monitor their behaviours on a continual (sometimes) basis instead of occasionally (usual), and proximity monitoring requires learners to monitor their behaviour closely from time to time as they occur.

Self-reinforcement refers to the process whereby “individuals reinforce themselves contingent on their performing a desired response, which increase the likelihood of future responding” (Schunk, 2012, p. 405).

In summary, the behavioural theories of SRL emphasize the setting of provocation (stimuli) and circumstances to which learners respond, after which they are reinforced for their efforts. Key behavioural sub-processes are self-monitoring, self-instruction, and self-reinforcement. Learners decide which behaviours to regulate, set discriminative stimuli for their occurrence to develop SRL. Behavioural values are useful for self-regulation; by ignoring cognitive and affective processes they offer an incomplete account of range of self-regulation possible (Schunk 2012).

2.3.2 Phenomenological theoretical perspective of SRL

The phenomenological theory of SRL of McCombs (1986; 1989) is a theory that claims that SRL is informed by a collective sense of self-actualization and self-esteem. Phenomenologists assume

that “learners’ self-concept is at the heart of their motivation to be self-regulated” (Zimmerman & Schunk, 2001, p. 292; Zimmerman, 1990). The basic role of the self-concept in the learning process is to generate motivation, perseverance and effort during the learning process. Positive self-concepts give rise to positive expectations and feelings directly to be the motivation to learn and achieve self-regulation (McCombs, 2001).

SRL is influenced by learners’ needs to assess the personal meaning and relevance of learning tasks by using their personal power, self-esteem, self-identity and goals in order to attain the desired results (Zimmerman, 2001). McCombs (2001) distinguishes, in the phenomenological view of SRL, between a global and domain specific self-concept. The global self-concept of a learner is based on the assumption that learners make use of their own abilities to control their cognitive affect and keep the motivation of their learning. Learners with global self-concept in SRL possess the necessary knowledge and skills required for SRL. Lastly, global self-concept is moulded by the learners' perceptions of their personal characteristics, their self-esteem, setting of their personal goals and their ways of achieving their future dreams. On the other hand, the learners’ domain self-concept is viewed as the learners’ general beliefs about their ability to control their cognition, affect and motivation in a particular learning content context or subject.

The phenomenological view of SRL involves the following three steps: setting of goals, planning and selection of strategies, and implementation of the learning tasks and the evaluation (McCombs, 2001; McHahon & Lucas, 2001).

In goal setting, a learner sets goals and identifies what is important by using the aspects required by him/her to know and create realistic expectations by oneself. McCombs (2001) further opines that learners need to know what they like, and through the self-awareness and self-acceptance learners develop interests, needs and values towards achieving and making their personal goals relevant. In planning and selection of strategies, the learners have the opportunity to implement the actions by assessing the personal plans and selecting the right strategies in order 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 (McCombs, 2001). During the last step, the “development of self-monitoring, self-reflection and self-evaluation requires a learner to take action in order to achieve their desired goals and control their affects” (McCombs, 2001, p. 108). Further arguments are proposed by phenomenologists that SRL develops as a learner develops the following: self-concepts and processes such as self-awareness, self-monitoring and self-evaluation (McCombs, 2001).

Lastly, in the phenomenological perspective of SRL, learners are aware of the relevance of learning tasks, the avoidance of negative self-evaluation and of setting realistic goals which can improve their learning (Zimmerman, 1989; Zimmerman & Schunk, 1989).

2.3.3 Information processing theoretical perspective

The information processing theory emphasizes that self-regulation implies metacognitive awareness. Information processing requires learners to comprehend the task demands, personal qualities and strategies for carrying out the task. Metacognitive awareness also includes procedural knowledge. The basic component of self-regulation may be a problem-solving system in which the problem is to reach the goal, and the monitoring checks progress to determine whether the learning is occurring. Information processing research historically focused on cognitive variables, but increasingly researchers in this tradition are including motivational variables. The Information processing theory views learning as the encoding of information in the long-term memory. Learners activate a portion of the long-term memory relate new knowledge to the existing information in the working memory. Organised, meaningful information is easier to integrate with existing knowledge and more likely to be remembered (Schunk, 2012). SRL, which is seen as an inherent part of learning, is defined as metacognitively guided behaviour enabling learners to adaptively regulate their use of cognitive tactics and strategies in the face of a task (Winne, 1996). Schunk (2012) further states that self-regulation is roughly equivalent to metacognitive awareness or metacognition, where individuals monitor, direct, and regulate actions towards goals. This awareness includes knowledge of the task (what is to be learned, when and how it is to be learned), as well as self-knowledge of personal capabilities, interests, and attitudes. Self-regulation requires learners to have a sound of knowledge base comprising task demand, personal qualities, and strategies for completing the task (Schunk, 2012).

According to Schunk (2012), the information processing model of SRL comprises four phases which are the definition of tasks, goals, studying tactics and adaptations (which is optional). Puusteinen & Pulkkinen (2001) describe the four stages of information processing as: “task definition, which is characterised by the perceptions that learners generate about the task” (p. 276.). These are devoted to goal setting, planning and enacting tactics, strategies planned, and metacognitively adapting studying techniques with an eye to future needs, and refer to a process by which learners critically examine the things they came up with in the preceding stages, in the light of their meta-level knowledge.

The first stage requires a learners to process information about the conditions that are based on the task. This involves two sources of information: task condition and cognitive condition. In task condition, Schunk states that it includes information about the task that learners interpret based on the external environment, and cognitive conditions are those that learners retrieve from the

long-term memory. In stage two, learners decide on the goal and a plan for attaining it, and in phase three, the plan will include relevant learning strategies. The last phase is adaptation, wherein students evaluate their performance and determine how to modify their strategy in order to achieve higher performance in the future. They may change their goals or their plan; they may also choose not to attempt that particular task again (Schunk, 2012).

Schunk (2012) maintains within each phase, an information process occurs and constructs information products or new information. Information processes work on existing information and are characterised by the acronym SMART: searching, monitoring, assembling, rehearsing, and translating. Working on a task requires using a schema, or script, and has five possible slots to fill, characterised by acronym COPES: conditions, operation, products, evaluations, standards (McHahon & Lucas, 2001).

2.3.4 Volitional (performance) theory perspective

Schunk (2012) defines volition as the act of using the will, the process dealing with implementation of actions to attain goals. Woolfolk (2013) defines volition as the protecting of opportunities to reach the goals and further states that self-regulated learners know how to protect themselves from distractions; where to study so that they are not interrupted. According to Corno (1994), volition is the “tendency to maintain focus and effort toward goals despite potential distractions” (p. 229). Corno (1993) further explains that volition can be characterised by a dynamic system of psychological control processes that protect concentration and direct effort in face of personal and or environmental distraction, and so aid learning and performance. Learners know how to cope when they feel anxious, drowsy, or lazy, and they know what to do when they are tempted to stop working (Woolfolk 2013). Their will-power, self-discipline, and work styles protect opportunities to reach goals by applying SRL (Woolfolk, 2013). Schunk (2012) states that the will reflects one’s desire, want, or purpose; volition is the act of using the will. Volition works to execute intended actions by activating mental representations of them, which serve as guides for behaviour (Schunk, 2012).

2.3.5 Cognitive Construct perspective

The cognitive theory of self-regulation in construct theory is the inherent features of constructive account of learning, cognition, and motivation (Schunk, 2012). Woolfolk (2013) states that as children develop, their thinking becomes more organised and adaptive and less tied to concrete events. A major type of implicit theory involves children’s beliefs about their academic abilities, and children who experience learning problems, and who believe that these problems reflect poor ability, are apt to demonstrate low motivation for success (Schunk, 2012). The knowledge comes from reflecting on and coordinating our own cognitions or thought, not from mapping external

reality. The beliefs that effort leads to success and that learning produces higher ability are positively related to effective self-regulation.

Processes such as learning, thinking, and ability influence how learners engage in learning and their views about what leads to successes outside of the classroom (Schunk, 2012). The construct theory of SRL further stresses that self-regulation involves the coordination of mental functions, such as memory planning, evaluation, and synthesis. Learners use the tools of their cultures, such as language and symbols, to construct meanings of content and situations. The key feature is the internalization of self-regulatory processes; although learners may acquire self-regulatory strategies from their environments, they alter and adapt them for use in their personal self-regulatory systems.

Self-regulation and motivation are related in such a way that processes as goal setting, self-efficacy, and outcome expectations are important motivational variables that affect self-regulation. SRL can motivate learners to set new goals and continue learning in order to achieve their desired results. Other motivational variables involved in self-regulation include values, goal orientations, self-schemas, and help seeking. Collectively, these variables may help to determine how achievement behaviour is instigated and sustained as learners engage in choices regarding the content, location, timing, and outcomes of their learning. According to Wong and Kerr (2009), the constructive view of learning emphasizes the teacher's role as the facilitator of learning and constructs the learner's own knowledge. The construct theory stresses that the learner's content and organisation of the curriculum are the bases for learning and the learner becomes engaged in learning. According to Wong and Kerr (2009) the construct viewpoint is that learners have their own opinions and views and will derive their own understanding from situations based on the following three principles such as learning, concept of absolute truth, and knowledge construction. Learning involves mental construction of knowledge by the individual, rather than absorption from external sources; the concept of absolute truth is replaced with the concept of viability and knowledge construction is social and cultural processes. Wong and Kerr (2009) further state that the construct learning environment is associated with the following aspects: organise a small assessment task to achieve overall learning objectives, ownership of learning and problem solving. The task must closely relate to real life problems; allow different aspects or solutions to solve the assessment task/problem; the learning environment should be very similar to real life environment; allow interactive learning; guidance should be provided; build on the learners' prior knowledge; opportunity for social interaction; communication with peers and others, and allow alternative learning strategies.

2.3.6 Vygotskian or Sociocultural theoretical perspective

Vygotsky's theory of development provides a social construct account of self-regulation. Schunk (2012:428) states that Vygotsky's constructivist theory of human development leads itself well into self-regulation, and it is believed that people and their cultural environments constitute an interacting social system. On the other hand, Woolfolk (2013:361) maintains that social interaction, cultural tools, and activity shape individual development and learning. Schunk further stresses that, through their communications and actions, people in children's environments teach them (children) tools (e.g., language, symbols, signs) they need to acquire competence. Self-regulation can be achieved using these tools within the social system; learners develop higher-level cognitive functions such as problem-solving and self-regulation.

The Vygotsky view of SRL includes the coordination of such mental processes like memory, planning, synthesis, and evaluation, and further stresses that these coordinated processes do not operate independent of the context in which they are formed, and learners' SRL processes reflect those that are valued and taught in the culture of a learner's home and school (Schunk, 2012).

Therefore, Vygotsky believes that learners learn to self-regulate through control of their own actions. According to Woolfolk (2013), by participating in a broad range of activities with others, learners appreciate (the outcomes produced by working together; this means they are able to reason, act, and participate using cultural tools. These outcomes could be both new strategies and knowledge. Therefore self-regulation involves the transition from responding to commands of others to the use of speech and other cognitive tools to plan, monitor, and direct one's activities (Schunk, 2012).

According to Schunk, (2012) through interactions with other people in the Zone Proximal Development (ZPD), the learner makes the transition from behaviours regulated by others to behaviours regulated by themselves, or SRL. Woolfolk (2013) further explains that culture creates cognition when other people uses tools and practices from the culture (language, maps, computers, looms, or music) to direct the learner toward goals the culture values (reading, writing, weaving, dance) while cognition creates culture as the older people and child together generates new practices and problem solutions to add to the cultural group's repertoire.

In this study self-regulated learning and the teachers' roles in developing SRL is viewed from a social cognitive perspective.

2.3.7 Social Cognitive theoretical perspective of SRL

The social cognitive theory was originally named the social learning theory (Schunk, Pintrich and Meece, 2014; Woolfolk, 2013). The social cognitive theory expanded on the social learning theory

by including cognitive factors such as beliefs, expectations, and perceptions of self. Albert Bandura is viewed as the founder of the social cognitive theory because he examined different perspectives of learning in the 1950s in which he proved that people can learn by observing actions of others and consequences of those actions (Bandura,1986; Woolfolk, 2013:398). For example, learning often proceeds best when learners observe social models like teachers, after which they become able to perform skills in an elementary way with appropriate guidance and feedback; subsequently the learner develops self-competence (Schunk, 2012).

Bembenutty *et al.* (2015) stated that the social cognitive theory "emphasizes the importance of human agency and provides the framework to study how learners acquire capabilities, skills, personalities, beliefs and guidelines" (p. 1). The social cognitive theory view individuals to be agents of change who develop and familiarise with the intention to influence their own effective and goals while taking control over their outcome and the environment (Bembenutty *et al.* 2015; Woolfolk, 2013).

The basis of the social cognitive theory's view of SRL is that human functioning is the product of self-motivation through interaction, in sequences of mutual interactions between the personal, environmental and behaviour determinants (Zimmerman, 1989; Zimmerman 2000; Bruning et al. (2011). Zimmerman (2013) and Woolfolk (2013) conclude that although the three determinants (personal, behavioural and environmental) of SRL are distinctive, they are interdependent and in constant interaction.

An individual's learning occurs in a social context and it is thus influenced by all three determinants.

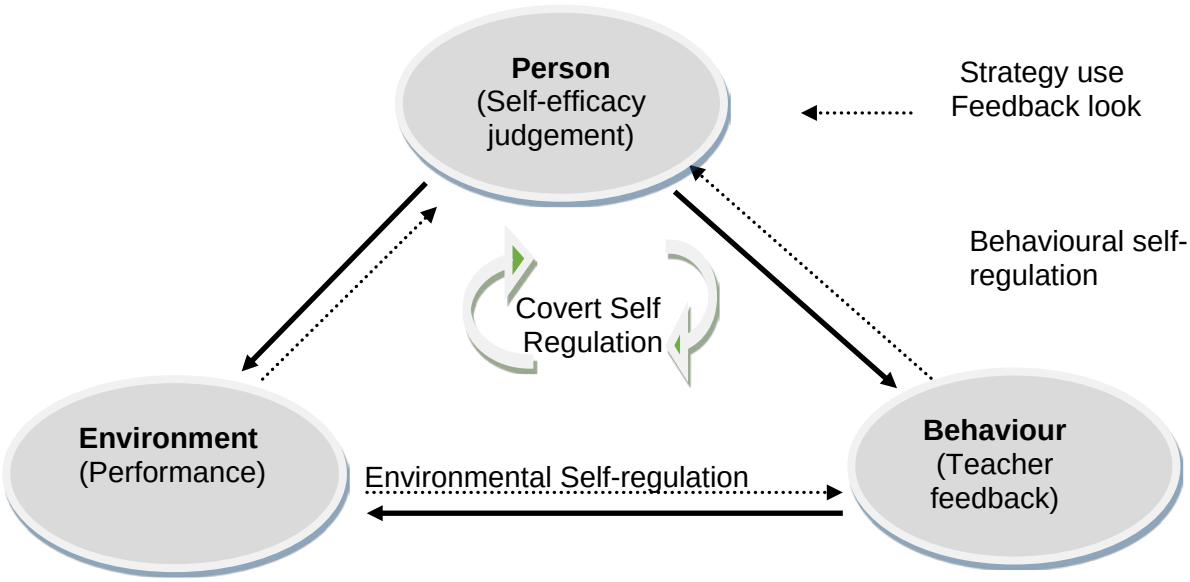

Figure2.1: Model of triadic reciprocality (Schunk et al. 2014, p. 128)

Personal determinants involve the learner's knowledge, expectations and goals, which influence behaviour determinants such as persistence, self-observation and study methods used in order to achieve the set goals (Zimmerman, 1989). Bruning et al. (2011) explain that personal determinants include "beliefs and attitudes that affect learning" which are used as reaction to change behavioural and environmental factors. Schunk et al (2008) further explain that the personal determinants or factors within the social cognitive theory show that learners do not always react passively to the environmental factors but are rather active participants who are mindful of the stimuli around them. Learners are for example active when they plan and adapt their learning goals or strategies to achieve those goals.

Behavioural determinants refer to "processes such as self-observing and strategically adjusting performance processes such as one's method of learning or the responses one makes in a given situation" (Zimmerman, 2000, 14) ,. For example, changing a poor test score by studying with increased effort (Zimmerman 2013; Bruning et al. 2011). Another example of the influence of personal determinants on behavioural determinants is, when a learner's confidence and interest to learn (personal), increase because of his or her increased effort (behaviour) in learning tasks (Woolfolk, 2013).

The third determinant is the environmental determinant, which demands the use of social and physical structures such as friends and family who serve as social support and models for SRL (Schunk, Pintrich, and Meece 2014). Woolfolk (2013) states that modelling of teaching strategies, or teacher feedback (elements of the environment for the learners) can affect learners' personal determinants such as goal setting, sense of self-efficacy for the activity, attributions, and the use

of processes for self-regulation such as planning, monitoring, and controlling distractions. Environmental and personal determinants consequently influence learners' behavioural determinants such as their effort and persistence to attain more effective learning.

In the social cognitive theory a learner's self-efficacy, outcome expectations and goals are emphasized in the process of becoming self-regulated. Learners become aware of their development and learning through self-observation and self-recording of their learning behaviour. The key processes in the development of SRL are self-observation, self-judgment and self-reaction. The social and physical environments of learners are important for the development of SRL because in these environments an important element of the social cognitive theory, observational learning, takes place (Woolfolk, 2013). Observational learning is socially influenced by modelling, verbal descriptions, social guidance, practice and feedback (Woolfolk, 2013; Hadwin & Oshige, 2011). Mehdipour and Balaramulu (2013) state that communication (verbal and non-verbal) with feedback is essential as it helps to build good relationships between teachers and learners. With the interaction between the teachers and learners in classrooms, learners learn by observing and imitating the actions of the teacher. This helps learners to become goal directed and to engage in learning. The social cognitive theory gives a clear explanation of how learners learn to acquire new knowledge within their social contexts where they interact with peers, parent, family members and teachers (Schunk, 2001; Zimmerman, 2000).

In the next paragraphs the models of SRL viewed by different researchers will be discussed.

2.4 MODELS OF SRL

Models of SRL refer to attempts to understand how learners can and do take an active role in managing their own academic functioning. Models of SRL viewed in this chapter are Boekaerts' models, Borkowski's (1996) Process-oriented model of metacognition, Winne and Hadwin's (1998) Four-stage model of SRL, Pintrich's (2000) General framework for SRL and Zimmerman's (2000) three phase model of SRL. Each model is briefly described. The social cognitive model of Zimmerman's (2000) three phase model will be discussed in more detail than the other models, as it forms the theoretical framework of this research study. The different sub- processes of Zimmermans' model will be explained in depth because it served as the basis for collecting data through interviews and observations.

2.5 BOEKAERTS' MODELS OF SRL

Boekaerts developed various models of SRL which started during the 1980s to 2011. Her six component model is based on cognitive and affective/motivational self-regulation. The model is divided into cognitive self-regulation and motivational self-regulation. Cognitive self-regulation consists of content domain knowledge, cognitive strategies and cognitive regulatory strategies,

while the motivational self-regulation includes metacognitive knowledge and motivational beliefs, motivational strategies and motivational regulatory strategies (Panadero, 2017).

Boekaerts' Adaptable learning model (1991, 1992, 1996), is based on the psychological frameworks of motivation, emotion, metacognition, self-concept and learning (Panadero, 2017). The model uses the following two methods: the mastery or learning approach and coping or well-being approach.

Her three-layered general model (1999) focusses on the three different processing approaches of SRL namely: the choices and the implementation of metacognitive strategies; the roles of metacognitive knowledge and skills and the last focuses on the regulation of self and is linked to the goals and resources (Nodoushan, 2012). This SRL model of Boekaerts focusses on goal setting in learning where learners should use context-specific, goal-directed learning actions (Boekaerts & Niemivirta, 2000). This model encourages learners to reflect on their learning performances in order to reach their goals (Bembenutty et al., 2015).

Boekaerts' Dual processing self-regulation model (2011), is based on the following learning processes: expanding learners' knowledge and skills; the protection of learners' commitment for the learning activity, and the prevention of threat and harm to the learner (Panadero, 2017). The model further uses both positive and negative reactions to develop SRL. The learners use assessment, evaluations and judgement to determine which goals can activate their structural knowledge and guide their learning behaviour. The teachers' role is to guide and control learners who lack metacognitive knowledge and skills and who feels inferior. Boekaerts (2011) explains that a learner who is self-regulated internally can set learning goals and select the best suitable learning approach, whereas learners who are less self-regulated depend on external regulation from teachers or peers to direct their learning.

2.6 BORKOWSKI'S PROCESS-ORIENTED MODEL OF METACOGNITION

The basis of this model is that the development of self-regulated learners begins when learners are taught the use of a learning strategy which grows progressively into knowledge about the attributes and aspects of that particular strategy. Over a period of time the learners also learn other strategies until they become strategic to recognise the effectiveness of different strategies for different tasks. The learner also develops positive attributional beliefs and high self-efficacy beliefs which link the strategy use to personal and motivational states of the learner. This model is a process-oriented model of metacognition characterised by good strategy use and information processing (Puustinen & Pulkkinen, 2001). This model focuses on the development of self-regulation, where learners proceed from learning with lower level cognitive skills and become gradually skilled in higher cognitive and metacognitive strategies in their learning processes. The

most important individual element of the model is strategy selection and use (Puustinen and Pulkkinen 2001). The teachers' roles in the model consist of evaluating and redirecting learners' thinking processes.

2.7 PINTRICH'S GENERAL FRAMEWORK FOR SRL

Pintrich (2000) developed a general framework for SRL which comprises four areas in the development of SRL. These areas for self-regulation take account of: the cognition, motivation and affect, the behavioural, and context of development of SRL. Within each area, learners pass through four phases of self-regulation such as the forethought which involves planning, and activation, monitoring, control, and reaction and reflection (Schunk, 2005). The areas and phases of the general framework do not automatically occur in a direct manner and "could occur simultaneously and interactively as a learner progresses with a task" (Schunk, 2005, p. 86).

The self-regulatory activities occurring during the forethought phase of this model include prior knowledge of the content and the metacognitive knowledge activation (cognitive area), efficacy judgements and the adoption of a goal orientation (motivation and affect area), time and effort planning (behaviour area) and learners' perceptions of activity and context (context area).

Monitoring consists of awareness and monitoring of learners cognition, motivation, affect, time use, effort and task and context conditions.

According to Puustinen and Pulkkinen (2001), the control of learners' activities refers to the "selection and adaptation of strategies for managing learning, thinking, motivation and affect for the regulation of effort and for task negotiation".

Reflection includes "cognitive judgements, affective reactions, making choices, and task and context evaluation" (Puustinen & Pulkkinen 2001, p. 275). The self-reaction phase entails the following processes: self-satisfaction and adaptive inference. Self-satisfaction relates to the level of satisfaction of the performance which then influences the learner's self-motivation. Adaptive inferences is based on what learners decide to do to change their self-regulatory strategies, which might include the alteration of goals or use of different study tactics (Puustinen & Pulkkinen, 2001).

2.8 WINNE AND HADWIN'S (1998) MODEL OF SRL

Winne and Hadwin's (1998) model of SRL includes of four phases: a) the task definition, b) goal setting and planning, c) *enacting study tactics and strategies and* (d) *metacognitively adapting studying.*

During the task definition phase, a learner uses interpretive task processes, limitations, and context by incorporating the current (new) and previous (prior) knowledge of the task context to understand the task given. In the second phase, namely goal setting and planning, a learner sets goals and plans about what strategies to deploy, based on the learner's understanding of a task. In the third phase, strategy enactment, the learner implements the strategies s/he has planned and engages into learning activity. In the last phase, evaluation and metacognitive adaptation, the learner evaluates the results, the strategies used and the whole learning process and makes a final adjustment according to the evaluation of the learning experience.

These phases do not necessarily occur in sequence; some phases may be skipped while some phases may be repeated. According to Winne and Hadwin (2008) learners are also recursive, by that they mean that "the results of engagement in any particular phase can feed into metacognitive monitoring that occurs in any previous or subsequent phase".

Winne and Hadwin's (1998) model also offers "COPES cognitive strategies within each phase. These cognitive strategies involves "Conditions, Operations, Products, Evaluation and Standards (COPES)" (p. 289). The learner uses the cognitive structures to complete each phase" and then the learner moves on to the next phase.

Conditions include resources, instructional cues (e.g., teacher's influence), time (e.g., time constraints), and social context (e.g., classroom climate, learning environment). Conditions also include cognitive beliefs about knowledge, motivation, and knowledge about a specific domain, tasks, and studying strategies.

Operations refer to cognitive processes, tactics, and strategies that learners engage in. Products are outcomes created as a result of operations. Evaluations refer to internal or external feedback about products that are generated as learners move in and out of each phase. The learners evaluate their own understanding of a task by comparing it with peers or grading (external) or with their previous experience and knowledge about a task (internal).To evaluate learners' cognitive processes, they use standards. Standards refer to criteria against which learners' products are monitored.

2.9 ZIMMERMAN'S SOCIAL COGNITIVE MODEL OF SRL

The social cognitive model of self-regulation is based upon "four core properties of human agency" (Bembenutty, 2015, p. 12) in which a learner's learning processes and accompanying motivational beliefs fall into three self-regulatory phases: forethought phase, performance or volitional phase and the reflection phase (Zimmerman, 2013; Zimmerman & Moylan, 2009). The three cyclical phases illustrate the processes and sub processes self-regulated learners

demonstrate in their learning processes (Bandura, 1991, Pintrich & Groot, 1990; Puustinen & Pulkkinen, 2001; Yabtibas & Yastibas, 2015; Nilson, 2013).

Zimmerman's self- regulated learning model is based on a "set of self-regulating, activity-orchestrating strategies such as planning time, resources, reading or learning strategies, interpreting feedback and self-monitoring, adjusting strategies or objectives as needed, managing motivation and emotions, and self-assessing strategies and outcomes." Zimmerman's (2000) cyclical model of SRL also implies that personal, environmental and behavioural determinants influence self-regulated behaviour through triadic feedback loops in a cyclical manner (Zimmerman, 2000) (§2.3.7).

Figure 2.2 shows the cyclical phases and sub-processes of Zimmerman's (2000) and Zimmerman & Moylan's (2009) model of self-regulated learning (Zimmerman 2002, 2013, Bembenutty, 2015):

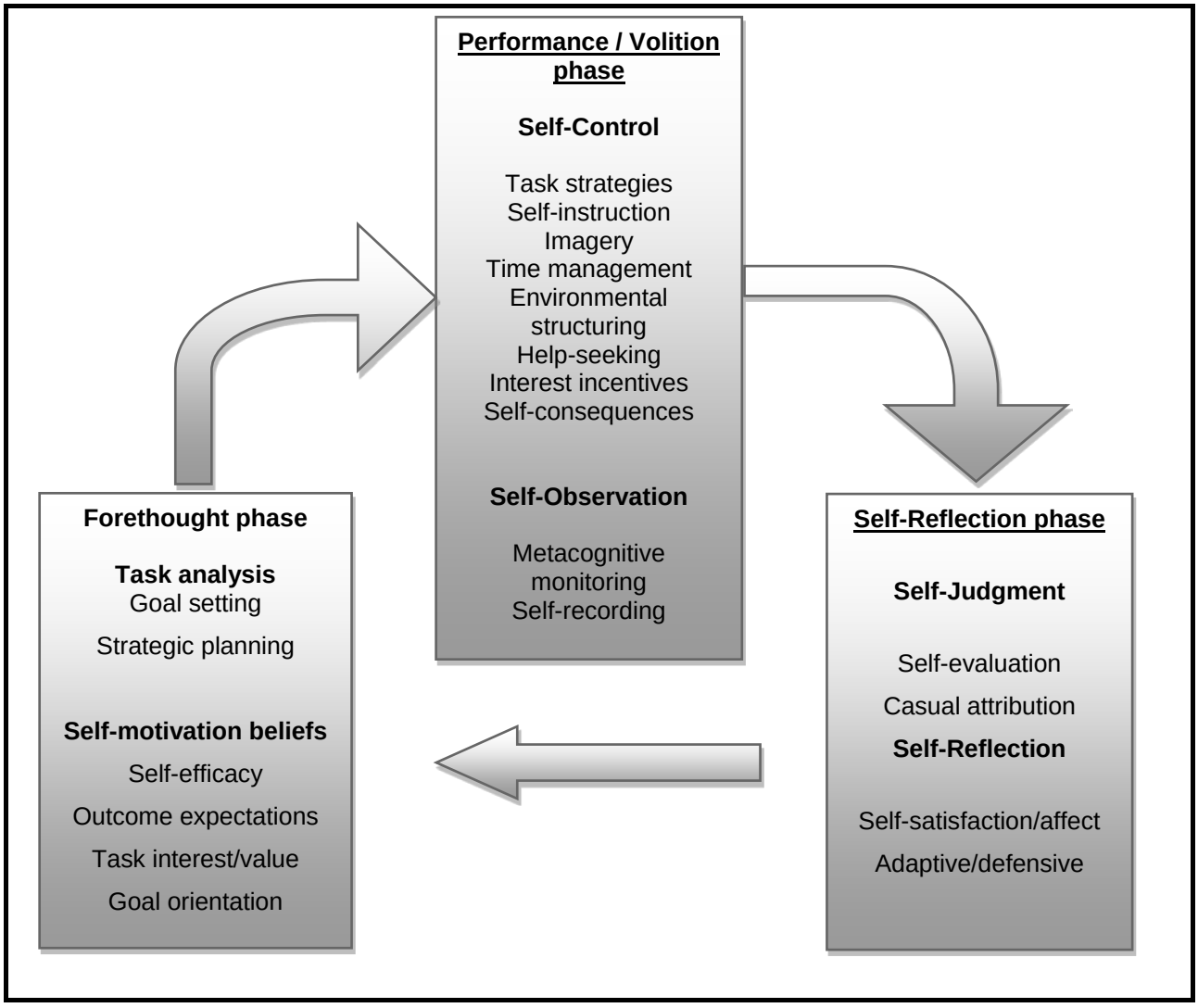

Figure 2.2: Current version of cyclical phases model, Adapted from Zimmerman & Moylan (2009, p. 5).

2.9.1 Forethought phase

Zimmermans' (2000) three phase cyclical model for SRL adapted by Zimmerman & Moylan (2009) will be discussed next.

Forethought phase

Schunk (2012) states that the forethought phase refers to "processes that set the stage for action" (p. 411). According to Zimmerman (2013), forethought phase processes are actions self-regulated learners take before they engage in learning with the intention to enhance their learning. The forethought phase of SRL consists of two intertwined main processes namely, task analysis and self-motivational beliefs. Task analysis and motivational beliefs influence one another. For example when learners successfully analyse tasks, set goals and plan, they become motivated, develop intrinsic interest in a task, value the task and have higher self-efficacy beliefs because of their mastery and success (Zimmerman, 2000). The opposite is also true. Less self-regulated learners who fail to analyse tasks, who do not plan and set goals have low motivation, poor self-efficacy beliefs and little task interest.

Task analysis refers to the process where learners break up the learning tasks into smaller key components to better understand what the task requires from them (Zimmerman, 2013). Aguilar (2010) states that task analysis enables learners to familiarise themselves with the task and to minimize the unknown. Task analysis also helps to develop a positive mind set and realistic expectations which can make the task more appealing for learners. Task analysis involves two sub-processes namely, goal setting and strategic planning (Zimmerman, 2002; Bembenutty, 2015).

Goal setting refers to the learners' decisions about what specific results they want to achieve. A learner sets out the purposes of his or her performance by identifying the standards or the aims of his or her learning (Schunk, 2001). Goals must be set as specific outcomes, arranged in order from short-term (proximal goals) to long-term (distant goals). The learner sets goals and plans strategies to achieve these goals based upon the analysis of the task. Goal setting helps learners to direct their attention and learning behaviours to accomplish the set goals. They also choose and apply appropriate strategies to achieve the set goals. Goal setting enhances learners' self-motivation and boosts their self-efficacy beliefs when they monitor and self-evaluate their progress and see they have achieved their short term goals. Teachers must assist learners to set realistic and achievable academic goals to boost their academic performance (Schunk, 2003). Zimmerman (2013) further states that task analysis, goal setting and strategic planning requires personal initiative and persistence.

Planning requires strategic skills to plan the use of appropriate strategies, time and resources for different tasks (Zimmerman, 1989: 2000). Under this sub process of task analysis, a learner needs to identify and use appropriate cognitive strategies, control his/her motivation and direct his or her monitoring skills to achieve outcomes (Zimmerman, 2000). A self-regulated learner adjust plans and strategies to adapt to his personal, behaviour and the environmental situations. Planning enables learners to make choices on the strategies they consider work the best and to still achieve their intended goals (Zimmerman, 2000). Learners can for example plan their time by using a study time-table (Boer *et al.,* 2012) plan from which they will seek help, information or advice (Nodoushan, 2012) or plan what, where, and with whom they will study. Learners can also plan and decide which cognitive strategy will be the best to attain their goals. A learner can for example plan to use the following cognitive strategies: elaboration (where a learner connects new knowledge to existing knowledge), rehearsal (learner store the new knowledge after repeating) and organisation (mind maps or flow charts to organise information) (Boer, Donker-Bergstra & Kostons, 2012).

The next process of the forethought phase involves self-motivational beliefs. Learners' self-motivational beliefs include the following sub-processes: self-efficacy, outcome expectations, intrinsic interest, value and learning goal orientation (Zumbrunn, *et al*., 2011).

Self-efficacy refers to learners' own beliefs in their capabilities to learn or perform effectively (Zimmerman, 2000; 2002). Self-efficacy beliefs are formed by four sources. The sources are: mastery experience (when an individual achieves a task or goal successfully), verbal persuasions (feedback from peers and teachers), vicarious experiences (seeing others perform activities successfully) and physiological and emotional factors (physical symptoms that learners experience that indicate their capability to achieve a task successfully) (Schunk et al., 2014). Self-efficacy beliefs causally influence learning strategies, academic time management, resisting peer pressure, self-monitoring, self-evaluation and goal setting. For example: the more capable people believe themselves to be, the higher the goals they set for themselves and the more committed they remain to these goals. When people fall short of attaining their outcome goals, those who are self-efficacious increase their efforts, whereas those who are less self-efficacious decrease their efforts and self-doubters withdraw (Schunk et al. 2014).

Outcome expectations is the next sub-process under self-motivational beliefs. Outcome expectations refer to learners' own personal beliefs about the consequences or the end result of their learning process. If learners' learning have positive outcome expectations, they will persist and work hard to attain their goals. If a learning task has no positive outcome expectations, learners will be demotivated to engage in learning.

Task interest or value refers to the learners' valuing of the task skill for its own merits. Tasks offer different values such as attainment value, intrinsic value, and utility value. If tasks are related to learners' everyday lives and they know the tasks will help them in future, they will be more interested in the learning tasks (Schunk et al., 2014). Zumbrunn *et al.* (2011) argue that learners who are aware of the value of the learning tasks usually takes time to set goals and to plan strategies to complete that tasks. Outcome expectations also influence the value a task has, the motivation a learner has to work hard, and the effort that a learner will put into task analysis, planning and goalsetting (Zimmerman, 2002).

The process goal orientation refers to the reasons why learners engage in a task. Learners with a performance goal orientation are usually extrinsically motivated and engage into tasks to outsmart others. On the other hand self-regulated learners have a mastery or learning goal orientation. Learners with a mastery goal orientation are intrinsically motivated to learn, put a lot of effort in their learning and see failure as part of learning (Schunk et al., 2014).

The second phase in Zimmerman's (2000) model will be discussed next.

2.9.2 Performance or Violation phase

The performance phase is defined as "processes that occur during behavioural implementation" (Zimmerman, 2002, p. 67). During the performance phase, learners focus their concentration and use the appropriate learning strategies to keep up with motivation level and tracking of their own learning progress towards the set goals (Panadero & Alonso-Tapia, 2014). The main processes of the performance phase include self-control and self-observation.

During the self-control process, learners concentrate on the task and adjust their efforts and task strategies to ensure that the tasks are understood and completed in a meaningful way Puustinen & Pulkkinen (2001). There are eight sub processes in the performance or volitional phase: metacognitive strategies such as task strategies; self-instruction; imagery; time management; environmental structuring and help-seeking, and two motivational strategies such as interest incentives and self-consequences (Panadero & Alonso-Tapia, 2014; Zimmerman, 2000; Zimmerman & Moylan, 2009; Yastibas and Yastibas, 2015; Paraskeva and Alexiou, 2010; Andrade and Bunker, 2010).

When learners have clear comprehension of the task, they can use specific task strategies to complete the task (Panadero & Alonso-Tapia, 2014). For example learners can read through a text and underline, take notes of important parts, or make a mind map about the text. By doing so, learners are reducing it into important, meaningful parts or sections. Yastibas and Yastibas (2015) state that self-regulated learners initiate their own ways of learning and use of task strategies to achieve the set goals.

Self-instruction refers to “self-directed orders or descriptions about the task that is being performed” (Panadero & Alonso-Tapia, 2014, p. 455). This involves a process whereby learners execute their tasks or ask themselves about what steps or procedures to follow in order to come up with the correct answer.

The learners can utilise imagery which involves the use of the learners mental images or pictures that organise the information and assist the learners to concentrate on their attention as images increase interests of learners to visualise circumstances (Panadero & Alonso-Tapia, 2014). Through this sub-process (imagery) learners’ learning is enhanced and memorised by creating the mental pictures to help and assist the control of encoding and performance (Zimmerman, 2000). Lastly, the imagery processes help a learner to visualise or create imaginary visuals about what something they are being taught might look like, or procure or step by step implementation processes of the activity.

Time management refers to the learner’s plans on how to use time in the learning tasks. Andrade and Bunker (2010) state that learners use evaluation processes in order to identify the correct times for them to study in a particular area or environment to avoid distractions such as noise. The learners need to set high expectation goals in order for them to work above what is expected to complete the task and measure the amount of time needed for each task (Panadero & Alonso-Tapia, 2014). Paraskeva and Alexiou (2010); Panadero and Alonso-Tapia (2014) add that learners use time management in order to know the successfulness of the task and use strategies to monitor the performance of the learning task to establish the time to finish.

A structured learning environment helps learners to maintain the attention and interest in the tasks they perform. This requires them to create an environment which is less distracting to allow learners to complete their learning tasks (Panadero & Alonso-Tapia, 2014). Environmental structuring can involve both social and physical environments. Learners make decision on the appropriate environment to study, for example: at home where there is a TV or studying in public places (Andrade and Bunker (2010), or learners may require materials first before starting a task in order to enhance concentration and efficient.

Help seeking refers to learners seek for assistance from other learners or teachers as a strategy to self-regulate their own learning. Help seeking is used by learners who experience underperformance in their learning processes and would like to change the situation, e.g. a learner can ask a fellow learner or teacher how to solve that problem. Germ and Mandl (2010) add that when learners identify a learning problem, they might seek for help from others. Through help-seeking learners can develop positive attitudes in learning (Andrade and Bunker (2010).

According the Panadero and Alonso-Tapia (2014), learners can use the *interest incentive* as a motivational strategy to enhance or maintain the learner's interest during the learning process. Learners can achieve interest incentive by self-directing information that a learner can use to remind oneself about the goals to be achieved. This involves learners using the following strategies: investigates on the new ways to solve the problem or avoid distractions to in order to carry out the task appropriately.

The last sub process is *self-consequences* as a motivational strategy whereby learners who do not experience progress in their learning can quit the task or use consequence to overcome the difficulty which will enhance the mind-set of learners to progress through self-praising and self-rewards (Panadero, 2014). The self-consequence process can be utilised once the learners have achieved their goals to ensure that learners keep themselves willingly making efforts, and keep their interest high.

The second main process in the performance or volitional phase is self-observation. In order for learners to control the task process, learners need to have a clear understanding of their capabilities, the quality of what they are doing, whether it is correct or not and whether they need to deploy other means to achieve the set goals (Panadero & Alonso-Tapia, 2014). Therefore, for learners to successfully observe their learning behaviour when completing a task, they need to use the following sub-process of self-observation: metacognitive monitoring (self-monitoring or self-supervision) and self-recording.

When learners self-monitor their work, they use the set criteria and goals to compare what they have done and what they must do next (Panadero & Alonso-Tapia, 2014). During this sub-process learners use self-assessment.

Metacognitive monitoring refers to a process which involves the informal tracking of a learner' own performance and outcomes (Zimmerman, 2013). Self-recording refers to formal records learners keep of their learning performance and progress (Panadero & Alonso-Tapia, 2014).

Self-recording is seen as an external strategy of self-observation which helps learners to observe, monitor and reflect on the tasks they have to complete. Through this sub-process learners are made aware of things that could go unobserved before the learning processes (Zimmerman, 2013). Aguilar (2010) further explains that learners will actually carry out the planned strategies such as note taking or memorisation techniques while engaging in volitional processes and self-observations to ensure that the current problem solving approach is effective. Learners can for example also record how much time they spent on a task.

The next paragraphs discuss the last phase of Zimmerman (2000); Zimmerman & Moylan (2009) model of SRL which is the self-reflection phase.

The next paragraphs discuss the last phase of Zimmermans' 2000 model of SRL which is the self-reflection phase.

2.9.3 Self-reflection phase

According to Schunk (2012), the self-reflection phase occurs after the performance phase. The self-reflection phase is divided into the following processes: self-judgement and self-reaction (Zimmerman, 2000).

Bandura (1991) and Panadero and Alonso-Tapia (2014) define self-judgement as a "method through which learners evaluate and assess their performance by applying their personal standards and set goals as criteria." During self-judgement learners judge their own work and reflect on their successes, failures and reasons for these. Self-judgement involves the following two sub-processes: self-evaluation and casual attribution.

Self-evaluation refers to comparing self-monitored information with a standard or goal. People use four types of criteria to evaluate themselves: mastery criteria, previous performance, normative and collaborative criteria (Schunk et al 2014). In terms of self-evaluation, learners assess their performance by themselves and adjust the previous used strategy to engage new strategies for better results (Paraskeva & Alexiou, 2010). Learners assess their own performance using the assessment criteria set by the teacher (Panadero & Alonso-Tapia, 2014). Teachers can assist learners by establishing assessment criteria before learners' start with the task. If learners know how they will be assessed, they can set more specific goals and use specific strategies to achieve well in tasks (Paraskeva & Alexiou, 2010; Panadero & Alonso-Tapia, 2014).

After learners have evaluated themselves they will give reasons for their failure or success. These reasons for failure or success are called causal attributions (Panadero and Alonso-Tapia (2014). When learners have an external locus of control they will blame their failures on external sources or influences such as too little support from teachers, bad luck or too difficult tasks. Learners with an internal locus of control will attribute their failure to their own abilities, the amount of effort they put into the task.

The next main process in the last phase of Zimmerman's model is self-reaction. (Zimmerman *et al*., 2015). Self-reaction refers to positive feelings of satisfaction or negative feelings of dissatisfaction resulting from evaluative judgement of one's performance Learners react emotionally and cognitively different to satisfaction or dissatisfaction after self-evaluation.

Self-reaction involves the following two sub-processes: self-satisfaction or affect, and adaptive or defensive behaviour. Self-evaluative and attributional self-judgements are linked to two key forms of self-reactions: self-satisfaction and adaptive inferences.

Selfsatisfaction involves one's perceptions of satisfaction or affect. When learners experience self-satisfaction after they evaluated themselves on reaching the set goals, they experience positive feelings towards learning. Such learners will in future set higher goals,work harder and persist longer with difficult tasks, plan better strategies and have higher levels of motivation and self-efficacy. People give direction to their actions and create self-incentives to persist in their efforts. The reason for this is because a person's motivation does not stem from the goals themselves, but rather from self-evaluative reactions to outcomes (Schunk et al., 2014). Self-satisfaction is also influenced by the intrinsic value the task has for the learner. The more valued the task is, the greater the satisfaction with success will be. Highly self-regulated learners value their intrinsic feelings of self-respect and self-satisfaction from work well done.

Adaptive decisions involve decisions learners make on their own after failure. They can for example decide to change their strategies, their effort, resources, and their willingness to perform better with tasks in the future. Adaptive decisions direct learners to new and potentially better forms of self-regulation, such as shifting goals or choosing other strategies.

Defensive decisions occur when, after failure, learners try to avoid to perform the tasks again in order to protect their pride and self-image. (Zimmerman, 2000). Learners who were unsuccesful in learning tasks, will avoid dissatisfaction and negative affect such as anxiety. Defensive self-reactions protect a learner from future dissatisfaction. Defensive decisions can be caused by the following factors: apathy, lack of interest or learned helpless (Panadero and Alonso-Tapia (2014). Learners who demonstrate defensive behaviour are handicapping themselves, because despite their protectiveness for their pride and self-image, they eventually limit their personal growth (Schunk et al., 2014).

The next paragraphs compare the different models discussed earlier in this chapter in short.

2.10 COMPARISON OF SRL MODELS

This section compares the SLR models developed by different authors by focussing on the researcher's name, the SRL processes such as the preparatory phase, the performance and the appraisal phase.

In summary, Similar to Pintrich's (2000) model, Zimmerman's (1989; 2000) model focuses on goal setting and beliefs about learners' ability to learn and the use of strategies like self-efficacy. Although Zimmerman's model comprises task analysis in the initial phase of forethought, the task analysis refers to the situation whereby the learner sets out specific learning outcomes and uses strategic planning to enhance learner's performance. Zimmerman (2004) distinguishes task analysis in forethought phase as the breaking of the academic task into components and setting goals and planning strategies for their attainments. Unlike Pintrich's model, the model overtly

states that task analysis is one of the components in the first phase of SRL, while the main focus of the task analysis is on goal setting and planning. From this comparison, the wo models (Pintrich's (2000); Zimmerman's (1989) show the similarities, but Winne and Hadwin's (1998) model clearly separates the process of task understanding from that of goal setting and planning. The model views the task definition phase as integral in SRL and clarifies the SRL process with relative to cognitive strategies that learners use. The model provides a comprehensive description of the cognitive processes that inspire each phase. This differentiation of Task Definition phase from Goal-setting and Planning phase and establishment of the cognitive structure make this model unique and particularly promising to advance research in SRL.

The model of Zimmerman (2000) is relevant for discovering teachers' use of SRL strategies in increasing learners' SRL strategy use to improve academic success, as learners have to exercise personal agency in applying the processes in three phases and benchmarking their academic goals to evaluate their learning.

In the following paragraphs the different strategies teachers can use to develop SRL will be discussed.

2.11 THE ROLES OF TEACHERS IN THE DEVELOPMENT OF SRL

This section discusses the role of teachers in development of SRL, the importance of teacher support, teachers' acceptance of their roles, and direct and indirect and strategies teachers use to develop and enhance SRL.

Teachers' teaching behaviours refer to what teachers do in the classroom in order to foster and develop SRL. According to Shahmohammadi (2014) (citing Wallace, 1994) teachers' teaching behaviours include roles to demonstrate expectations for learning and success, generosity, respect and joy to improve the conduct of learners.

The following paragraph explains the importance of the teachers' support in development of SRL:

2.12 THE IMPORTANCE OF TEACHERS' SUPPORT IN DEVELOPMENT OF SRL

SRL processes like planning, goal setting, self-evaluation, etc., are teachable; (Zimmerman, 2002) therefore teachers play an important role in developing SRL. Bembenutty (2015) argues that the responsibility of teachers is to demonstrate goal setting as a critical segment of teaching and learning.

Therefore the need to develop self-regulation in learners is of substantial importance, as well as the role of teachers to develop SRL.

2.13 TEACHERS' ACCEPTANCE OF THEIR ROLES TO DEVELOP SRL

Although teachers generally accept the important role in behaviour played by learners' self-regulatory activities, they often do not know how to teach learners self-regulatory skills or how to otherwise enhance learners' use of self-regulation principles in classrooms or other learning settings. This lack of knowledge stems from several sources such as teacher education programmes that typically emphasize content-area knowledge and mastery of pedagogical methods, and focus less on principles of learning, development, and motivation (Peeters, De Backer, Reina, Kindekens, Buffel & Lombaerts , 2014).

2.14 DIRECT AND INDIRECT DEVELOPMENT OF SRL

SRL can be enhanced through direct instruction, indirectly through experience, and be elicited through practice (Paris & Paris, 2001:89). According to Paris and Paris (2001:89), SRL teaching can be taught directly in the classroom whereby the teacher emphasises the details of teaching strategy which might involve the increase in learners' awareness about the appropriate motivational goals and standards. For example, during direct instructions, a teacher can instruct learners to analyse the concepts used in the topic to find their means and give examples to the class. One way through which teachers can develop SRL is through direct teaching of SRL strategies and modelling of SRL strategies. With teachers modelling the integration of SRL strategies during lesson presentation, learners' SRL is developed through different developmental stages: observation, emulation, self-control and self-regulation (Zimmerman, 2000). Learners can observe how a teacher writes on the board, uses different methods to engage learners as well as classroom management and time management. Learners can emulate the behaviour of the teacher that they view to be positive in their life. Furthermore, learners can still take control of their own learning strategies.

SRL can be enhanced indirectly through experience where the learner is exposed to realistic or repeated experience in school (Paris & Paris, 2001). This might take place when a learner realises that checking homework does not require additional time and leads to greater accuracy (Paris& Paris, 2001). Therefore SRL may emerge as tacit knowledge about what is expected by the teacher and what is useful behaviour for the learners.

According to Paris and Paris (2001) explicit instruction designed to avoid distractions and persevere in the face of difficulty is an example of volitional control that promotes SRL. For example, SRL can be acquired through engagement in practices that require self-regulation; that is, in situations in which self-regulation is welded to the nature of the task. For example, collaborative learning projects often require each student to contribute one part of the overall project (Paris & Paris, 2001).

Table 2.1: Examples of how teachers can develop SRL strategies in learners

Learning strategies	Examples of proposed tasks	Teacher's intervention	Learners' participation
Goal-setting	Discussion of objectives set in class by the teacher in regard to the topics of food and transport.	We need to plan what food we are going to help bring over to the children…why do we need to plan this?	"Because we should take good food and not candy…so we need to think about healthy food"
Planning	Pair-work: discussion and written exercise about the learners' choices in regard to the topics of food and transportation.	Monitored learner and answered questions	"what food are you going to take?";" I'm taking pizza, tomatoes and carrots because I like this food";" My favourite transportation is bus"
Rehearsing	Repetition of vocabulary words orally before reading the text	Had learners repeat vocabulary words after her.	"I think I can eat" ; "I think I can cook."; I can drive."
	Reading in pairs before reading aloud to the form	Monitored learners and answered questions	Learners read the text in class in pairs.
Memorization	Repetition of words orally and in written form	Helped learners to pronounce the words properly and wrote words on the board	"I can pay a ticket on the bus." ;S12: "I can tell the driver where I want to go," S15: "I can turn on the radio in the car."
Self-evaluation	Open ended written question at the end of class: "Today I learned…"	Monitored learners and answered questions.	"I learned how to make a plan" ; "I learned new words in English " I think I can write better about what food I like" I think my choices could be better if I had chosen other food"

Ferreira and Simão (2012, p. 4); Nodoushan (2012, p. 3); Zimmerman (1989, p. 337; 1990:7)

Table 2.1 shows different ways on how teachers can develop SRL strategies by using different learning strategies such as goal-setting, planning, rehearsing, memorisation and self-evaluation. Through the use of the above learning strategies a teachers' intervention is critical as it helps to direct the learner's development of SLR strategies directly or indirectly.

2.15 THE STRATEGIES TEACHERS USE TO DEVELOP AND ENHANCE SRL

Schunk (2013) proposes the following steps that teachers can use to develop, self-regulated strategies in their learners:

- Step 1: Analyse

Teachers should identify the learning goals or targets for learners. They should also highlight important aspects of the tasks and by doing so learners become aware of what is expected of them at the end of the lesson or the learning task. Learners can develop or link their set goals and become strategic planners on what strategy to use. Therefore, once learning goals are identified, this builds up the learners' interest in the task, and relevant personal strategies are deployed as useful learning techniques.

- Step 2: Plan

Teachers should create a strategy in which the task given must be completed by a learner in accordance with the criteria given. This allows learners to reflect on their own learning and use the standard set criteria for assessment to check their own performance.

- Step 3, 4 and 5: Implement, monitor and modify

Under these steps the teacher should engage approaches to enhance learning and memory. When monitoring, the teacher used the goal progress to see or find out which strategy would work the best. Lastly, the teacher makes an assessment on the strategy deployed to verify whether it must be abandoned or continue being used. By doing so learners develop skills on implementing the learning strategies, monitoring of the deployed strategy and finally modifying the strategies.

- Step 6: Metacognitive knowledge

The teacher should help learners to develop the metacognitive skills that enable them to complete the learning tasks.

Moseki and Schulze (2013) suggest that teachers can use problem based strategies to facilitate SRL by giving learners autonomy and control, independence and responsibility, for them to be motivated to learn. Learners are more likely to feel confident about themselves as learners if they can rely on their own resources for completing assignments, studying for tests, and achieving success in school.

Ferreira and Simão (2012) argue that teachers should acquire training in terms of explicit teaching SRL strategies, which is crucial for learners to develop general learning skills that are cross-curricular to any academic subject. Teachers serve as a reflective and analytical example of adaptability which learners can follow by scaffolding strategies in their learning environment, providing adequate and timely feedback (Ferreira & Simão, 2012). Teachers should adopt teaching methods that will allow the learners to plan and organise their own learning as well as identify, select and apply learning strategies to learning objectives, to identify and express difficulties, and be able to transfer knowledge from one context to another (Ferreira and Simão, 2012).

Beishuizen (2010**)** suggested the following as instructional strategies to foster SRL: At first teachers should prepare and structure the learning environment and by doing this, the teacher can help learners to remove sources of distraction before or during the learning process. In the second stage, the teacher should guide learners by providing learners with the outlines or advance organisers; or they can teach learners to improve the physical setting of the learning environment themselves. In the third step, the teacher needs to adequately guide the learners' progress through the learning processes as it contributes to quality of learning. In order to be able to monitor progress, teachers need to clearly state learning goals and should provide feedback on learners' progress towards attaining the goals. The teachers can train learners to keep record of their learning and evaluate whether learning goals have being achieved. This can be carried out by recording or harvesting their marks. Finally, model or performance standards enable learners to evaluate their current performance to the standard of the model. Ferreira and Simão (2012) provide an action plan for teachers to foster SRL, as shown in Figure 2.3 below:

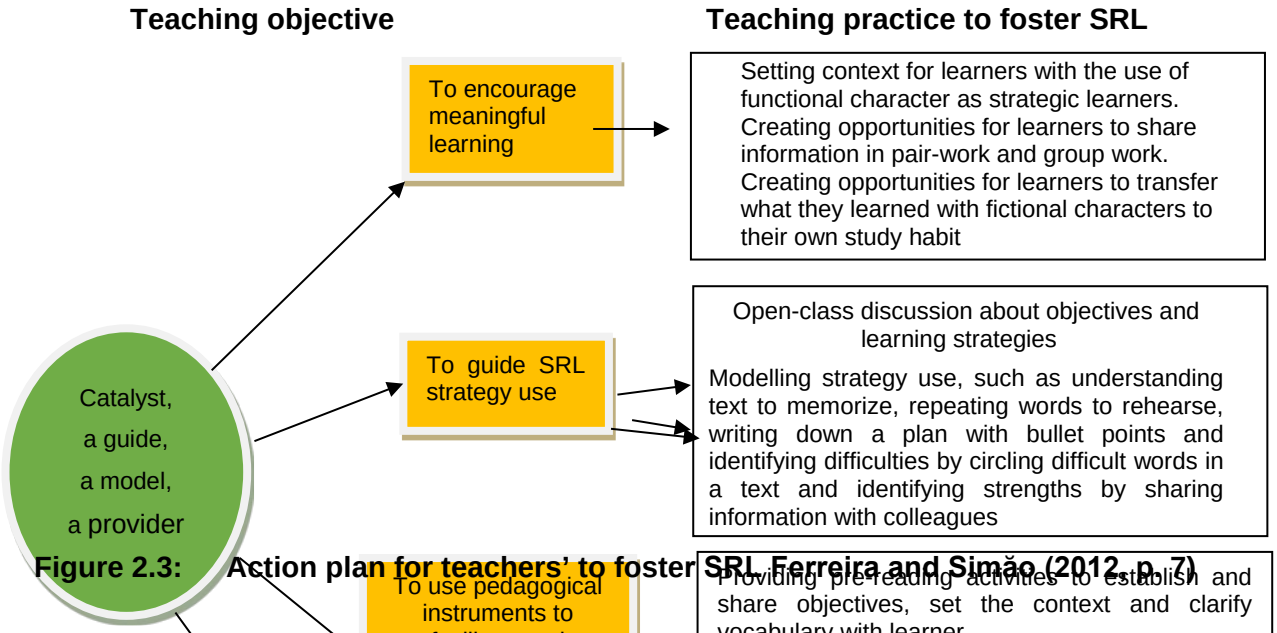

Figure 2.3: Action plan for teachers' to foster SRL Ferreira and Simão (2012, p. 7)

Teachers can help learners to become SRL through encouraging, monitoring, guiding and facilitating; they can also improve the learners' performance by using different teaching methodologies and learning strategies.

Ewijk and Werf (2012) further suggest that teachers can support learners to acquire self-regulation strategies. Using different elements of instruction that are not necessarily mutually excluding, teachers can model strategies to use or explicitly teach strategies or structure the learning situation in such a way that learners have the opportunity to discover strategizing procedures themselves. Therefore, Ewijk and Werf (2012) state that there three level of strategy instruction: *covert level* of training (blind training): learners are induced to use strategy without providing them with any information about the strategy in order to foster a concurrent

understanding about the significance of this activity; *intermediate level:* includes informed training; the learners are induced to apply a certain strategy but are also provided with some instruction about the significance of this strategy (this will lead to improved performance and keeping the activity up when a similar problem recurs); and lastly, *self-control training:* this is the highest level which combines the informed training with explicit instruction of how to apply, monitor, check and evaluate the strategy and learners facilitate the transfer of strategy application to appropriate setting in the most sustainable way.

Nilson (2013) argues that deep, lasting, independent learning requires a range of teaching activities: cognitive, affective and even physical activities that go far beyond reading and listening. These activities entail in the first place setting learning goals for a class period; an assignment or study session; the learner must plan how to go about the task effectively, for example, listening, taking notes, outlining, visually representing the material, occasionally self-quizzing, reviewing, or writing a summary.

2.16 SUMMARY

In summary, self-regulation is a process whereby learners activate and sustain cognitions, behaviours, and affects, which are systematically oriented towards the achievement of their goals. Self-regulated learning refers to learners' self-generated thoughts, feelings, and actions which are systematically oriented toward attainment of their goals Self-regulation is active and goal directed, which results from self-control of behaviour motivation and cognition. Self-regulated learning is characterized by three main features which include awareness of thinking, use of strategies, and motivation. Self-regulation emphasises the learners' reliance on their own internal resources to govern their learning, but these resources are not easy to allocate. Self-regulated learning is an end process, dependent upon the affects and cognitions that are initiated by the learner before and/or after learning.

The following theories were developed by different authors such as the phenomenological, social cognitive, volitional, Vygotskian and cognitive constructivist theories. Each theory has a unique framework in which it develops. The models of SRL which were explained were Boekaerts' model of adaptable learning, Borkowskis' process-oriented of metacognitive, Pintrich's general framework for SRL, Winne's stage model of SRL and Zimmerman's social cognitive model of self-regulation. The model of Zimmerman (2000) and Zimmerman& Moylan (2009) was explained in detail. The three phases of Zimmerman (2000); Zimmerman & Moylan (2009) include forethought, performance and self-reflection. A comparison between the different types of model was explored in which the similarities and difference were availed. The last part of the chapter deals with the teachers' perception and the values of SRL. The teachers' roles, their importance, the use of direct and indirect strategies teachers use to develop SRL were discussed. SRL is important as

it helps learners to become responsible for their own learning. This should then help learners to cope with learning tasks and to use different learning strategies.

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

The previous chapter, Chapter 2, provided insight into self-regulated learning, the roles teachers play and the strategies they use in the development of self-regulated learning. This chapter introduces the research design and methodology used by the researcher to carry out this research study. The sections in this chapter are: the purpose of the empirical research (§3.2); research design and methodology (§3.3); research paradigm (§3.4); qualitative research (§3.5) strategy of enquiry: case study (§3.6); population and sampling (§3.7); data collection (§3.8); data analysis (§3.9); trustworthiness (§3.10) and ethical considerations (§3.11); contribution of the study (§3.12), and the chapter summary (§3.13).

3.2 PURPOSE OF THE EMPIRICAL RESEARCH

The main purpose of this study was to explore how do teachers develop SRL in grade 8 learners in two rural Namibian schools. The subsidiary aims of the main aims of the study were to explore:

- To determine teachers' perspectives about the concept SRL and its value for academic success;
- To determine whether teachers are aware of the concept SRL and trained to use and implement SRL strategies;
- To determine which SRL strategies teachers use while teaching different grade 8 subjects.

To address the aims of the study, the following main research question with three sub-questions were posed.

3.2.1 Research questions

How do teachers develop SRL of grade 8 learners?

In order to ensure that primary question was explored the researcher decided to spit the main research questions into sub-research questions as follows:

- What are teachers' perspectives about the concept SRL and its value for academic success?
- Are teachers aware of SRL and were they trained to use and implement self-regulated learning strategies?

- Which self-regulated learning strategies do teachers use while teaching different grade 8 subjects?

3.3 RESEARCH DESIGN AND METHODOLOGY

A research design is a plan or strategy which moves from the underlying philosophical assumption to specifying the selection of participants, the data gathering techniques to be used and the data analysis to be done (Maree, 2007). Johnson and Christensen (2004) view a research design as an outline, plan or strategy researchers intend to use to seek answers to his or her research problem. According to Johnson and Christensen (2004) a research design must match with the kind of questions being explored and must obtain evidence to answer the research questions. McMilalian and Schumacher (2001) explain that the purpose of research design is to provide, within the appropriate mode of inquiry, the most valid and accurate response possible to the research questions. Therefore a research design serves as a structural guide to the processes and procedures a researcher should follow when conducting research.

This research study follows a qualitative research approach to explore the individual teachers' perspectives of how they develop grade 8 learners' SRL.

The next paragraphs discuss the research paradigm.

3.4 RESEARCH PARADIGM

Maree (2016) defines a research paradigm as "a set of assumptions or beliefs about fundamental aspects of reality which gives rise to a particular world view" (p. 52). Olsen, Lodwick and Dunlop (1992) define a research paradigm as a pattern, structure and framework or system of scientific and academic ideas, values and assumptions. Similarly, Justus and Nangombe (2016), Shannon-Baker (2015:321), and Huitt (2011) state that a paradigm refers to the collection of logical, connected concepts and propositions that provide theoretical perspectives frequently guiding the research approach towards a topic.

A research paradigm gives the researcher a simple belief (theory) which guides the way on how the research would be carried out in a practical situation. There are a variety of research paradigms or broad approaches to qualitative research, which include postpositivism, constructivism or interpretivism, pragmatism, subjectivism and critical theory approach. According to Maree (2016), research paradigms can be categorised by the following characteristics: "ontology (What is reality?), epistemology (How do you know something?), the theoretical perspective (Which approach do you use to know something?), the methodology (How do go about finding out?) and method (What techniques do you use to find out)."

This study was located within an interpretivist philosophical orientation to explore the perspectives of teachers regarding SRL and its academic value, and how they develop SRL in grade 8 learners.

The interpretivist philosophical orientation in qualitative research is concerned with meaning and it seeks to understand social members' definitions and understanding of situations to provide understanding of the manner in which a specific group of people make sense of their situation or phenomena they encounter (Maree, 2007).

Moreover, Maree (2016) states that an interpretivist philosophical orientation is based on the following assumptions:

- *Human life can only be understood from within.*

This assumption focuses on people's subjective experiences, on how people "construct" the social world by sharing meaning, how they interact and relate to one another. In this study the researcher formed part of the research and could not be excluded from the research, but rather had to interact with the research participants in order to understand their social worlds and subjective experiences. Furthermore the researcher had to explore the perceptions of teachers regarding the development of grade 8 learners' SRL through observing lessons and conducting semi-structured interviews with participants. The interaction (observing lesson and semi-structured interviews) between the researcher and the participants enabled the researcher to understand how teachers perceive and develop SRL in the classroom situation.

- *Social life is a distinctively human product.*

This assumption proposes that by placing people in their social contexts, there is a great opportunity to understand the perceptions they have of their own activities. Therefore the researcher worked with the teachers within their social contexts (classrooms) when observing their lessons and when conducting interviews after school hours on the school premises. Being part of the participants' daily social contexts generated greater opportunities to understand the teachers' perceptions with regard to the development of SRL.

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

Maree (2016:61) states that when researchers explore the richness, depth and complexity of the phenomena they study, they can begin to develop a sense of understanding of how the participants experience the phenomena and their social contexts. In this study the semi-structured interviews and lesson observations gave the researcher insight into perceptions of participants regarding SRL. The researcher had a better understanding of teachers' comprehension on SRL, their previous experiences with SRL and the strategies they use to develop SRL in grade 8 learners.

- *Human behaviour is affected by knowledge of the social world.*

The behaviour of teachers is influenced by their knowledge about SRL which helps them to develop SRL skills in leaners. The researchers' conceptual and theoretical perspective was enriched by exploring the perspectives of teacher's development of grade 8 learners SRL which would result in a stance that the more aware the teachers are of SRL, the better they can help to develop SRL.

- *The social world does not exist independently of human knowledge.*

This assumption proposes that there are multiple rather than single explanations of phenomena, and that how a phenomenon is experienced can differ across time and place. In this study the researcher took cognisance of participants' different understandings, experiences, training and strategies to develop SRL in grade 8 learners.

The following paragraphs describe how the qualitative research design was deployed in this research.

3.5 QUALITATIVE RESEARCH

The previous paragraphs provided insight into the epistemology, especially the interpretivist paradigm in which this qualitative research is located. Fraenkel, Wallen and Hyun (2015) define qualitative research as research studies that investigate the quality of relationships, activities, situations or materials. Maree (2016) highlights the following characteristics of qualitative research: it is naturalistic, relies on linguistic (words) rather than numerical data and it focuses on meaning-based data analysis rather than statistics-based data analysis. Qualitative research also involves the exploratory research questions and realistic (naturalistic) methods to the inquiry.

A qualitative methodology was the most appropriate methodology for this study since the aim of the study was to explore how teachers develop SRL in grade 8 learners. Qualitative research made it possible for the researcher to find a great deal of information about the participants' awareness of SRL, their feelings and their perspectives about the research topic. The study took place in participants' natural settings, schools, where their interaction with learners as well as the development of SRL occurs daily.

The following are the general characteristics of qualitative research that apply to this study as described by Fraenkel, *et al.* (2015, p. 424):

- *Natural setting is the direct source of data and the researcher is the key instrument in a qualitative research.*

The researcher observed the teachers' actions and words in the classroom since the researcher wanted to explore how the teachers develop SRL in grade 8 learners in the two rural schools where they teach. Furthermore, the researcher conducted semi-structured interviews with the teachers in their natural setting (school) where an office was allocated to the researcher by the principal. Participants were interviewed in the afternoons or evenings. The researcher spent a considerable amount of time, three to four days, at each research site during the period of data collection. The researcher collected the data through observations and semi-structured interviews in the natural settings of the participants. Therefore the researcher could take note of and record many attitudes, words, behaviours and actions used by the participants.

- *Qualitative data are collected in the form of words rather than numbers (descriptive data).*

The researcher used observation and interviews of 14 teachers to collect data which were presented in words. The data collected are descriptive about the perceptions of participants with regard to SRL and the development of SRL. The interviews were audio recorded, data (audio) were transcribed (**Addendum C**) and analysed at a later stage of the research process.

- *Qualitative researchers are concerned with processes as well as with the product.*

The researcher was concerned about how teachers develop self-regulated learning within grade 8 learners. The researcher was also concerned about how teachers would answer certain questions, and the meaning that teachers might give to SRL. Lastly the researcher was concerned about the attitudes and the gestures of the teachers during observations and interviews.

- *Qualitative research tends to analyse the data inductively.*

The researcher developed the primary and secondary questions before collecting data, and used the data collected to find out whether the research questions were answered or explored. Data collected from observations and interviews were collected in words and analysed inductively. The researcher classified the data into themes, sub-themes and codes. Therefore inductive strategy of data analysis was applied which guided the logical method of qualitative data analysis.

- *How people make sense (meaning) out of their lives is major concern to qualitative research.*

In this study the researcher was interested in finding the meaning on the following aspects: the participants' perception about the concept SRL and its value for academic success, their awareness of SRL, their former training in and exposure to SRL, and the SRL strategies they use to develop SRL in grade 8 teachers while teaching different grade 8 subjects.

Within the qualitative research, a case study was used as a research design or strategy of enquiry which will be discussed in the next paragraphs.

3.6 RESEARCH DESIGN: CASE STUDY

Qualitative research uses a variety of designs or strategies of enquiry such as narrative research, phenomenology, grounded theory, case studies and ethnography (Fraenkel, *et al.,* 2015). This qualitative research study used a case study as its strategy of enquiry to explore how teachers develop SRL of grade 8 learners.

According to Maree (2007) and Creswell, (2002), a case study is a qualitative research design in which the investigator explores a bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection. The data collection in a case study involves multiple sources of information, for example, observations, interviews, audio-visual material, documents and reports (Williams, 2007).

A case study is further defined as an empirical inquiry that investigates a contemporary phenomenon within its real-life context when the boundaries between phenomenon and content are not clearly evident (Maree, 2007; Verschuren, 2003). In this study the phenomenon under investigation was teachers' perspectives of how they develop SRL in grade 8 learners. The researcher had to explore the perspectives of teachers about SRL, and also explored which SRL strategies participants used in different grade 8 subjects to develop self-regulation.

The case study was suitable for this research due to its investigative nature on a contemporary phenomenon in a real life situation as it yielded a wealth of details. Using a case study led to a deeper understanding of the dynamic of the situations of participants and their understanding of SRL as well as the strategies they use to develop learners' SRL. The case study provided the researcher with a unique example of real people in real situations, which enabled the researcher to understand the abstract ideas and principles in literature about SRL better. A case study was also more suitable in this research, as it recognised many sources of information to present the evidence, which allowed the researcher to use multiple data collection methods such as observation and semi-structured interviews.

3.7 POPULATION AND SAMPLING

In the next paragraphs the researcher will highlight the important parts of this research in terms of definition, descriptions and the implementation of population and sampling.

3.7.1 Population

Fraenkel *et al*. (2015) define population as the large group to which a researcher hopes to apply the results. The term target population refers to the actual population to which the researcher would really like to generalize his findings in a research study (Fraenkel *et al*., 2015). The population in this study was all the teachers in the Bukalo circuit within Zambezi region located in

north-eastern part of Namibia. The Zambezi region has 111 schools of which 43 are junior or secondary schools with grade 8 as the lowest grade. The remaining 68 schools in the Zambezi region are primary schools. Zambezi region employs about 1634 teachers of which 1597 are qualified and 37 unqualified. Out of the total population of teachers in Zambezi region, the Bukalo circuit employs 288 qualified teachers.

The next paragraphs explain how sampling was done in this study.

3.7.2 Sampling

Sampling refers to a process used to select a portion of the population for study (Maree, 2007). The researcher selected a sample of the research population (grade 8 teachers) in order to learn about the perspectives of teachers towards the development of self-regulated learning of grade 8 learners.

This study used convenience sampling and purposive sampling. Mertens (2010) explains that convenience sampling means that the participants in the study were chosen because they were readily available. In this study convenience sampling was used based on the fact that the two schools chosen were easily accessible to the researcher and participants were conveniently available.

Maree (2007) defines purposive sampling as a method used in special situations where the sampling is done with a specific purpose in mind. In this research the target population was the grade 8 teachers in the two rural school. The specific purpose was that the researcher wanted to explore their views or perceptions of SRL and the strategies they used to develop SRL in the learners. The selected participants were able to provide valuable data to answer the research questions. For the purposes of this research study, purposive sampling allowed the researcher to select seven participants from two schools (total 14) according to the following predetermined criteria:

- Participants had to be qualified teachers;
- Participants at each school had to be teaching different subjects in the grade 8 curriculum;
- Participants had to be staff from the two selected schools offering grade 8 subjects.

The research participants in this study were teachers within Bukalo circuit in Zambezi region.

They were all qualified teachers who hold professional teaching qualifications. The teaching qualifications of participants ranged from a three yeas diploma to Bachelor’s degrees. Having

teaching qualifications was one of the most critical criteria participants had to meet, because the researcher needed participants with training and experience in teaching pedagogics.

The participants in the research were teaching different promotional subjects in grade 8. Promotional subjects include English second language, Silozi second language, Mathematics, History, Geography, Life Science, Physical Science, Computer Studies, Entrepreneurship, Accounting, and Agriculture. Non--promotional subjects are such as Religious and Moral Education, Basic Information Science, Information Technology and Physical Education.

The participants in this study were only teachers from the two selected rural schools.

After obtaining ethical clearance from the North West University (**Addendum J**) and permission from the Director, Ministry of Education, Arts and Culture (MEAC) Zambezi region (**Addendum G**), and permission from the two school principals (**Addendum H**) the researcher approached the staff at the two schools to explain the purpose of the research and requested volunteers to participate in the research. Fourteen (14) teachers who showed interest were then invited in writing to participate in the research. The researcher requested them to complete the consent forms for participants (**Addendum I**). The ethical issues were explained to participants. Participants were informed that they could withdraw from the research at any stage of the research without any consequences. Thereafter, the researcher kept contact with the participants in order to keep them motivated. The researcher visited the schools again to discuss the research process, and to finalise important dates and times of research activities which included the dates for classroom observation and interviews.

The teachers who participated in this research provided valuable data to answer the research questions about the role teachers play in the development of Grade 8 learners' self-regulated learning.

In the following section the biographical data of the participants are presented.

3.7.3 Biographical data of the participants

The table below shows the biographic data of the participants.

Table 3.1: Biographical data of the participants of School 1

School 1					
	No.	Gender	Teaching experience	Qualifications	Subject taught
Participants	1	M	2	Bachelor's Degree in Education (Social Science)	History
	2	F	8	Basic Teacher's Diploma in Education (Language Science)	Silozi First Language
	3	M	8	Basic Education Teacher's Diploma and Advanced Certificate in Education	Life Science
	4	M	8	Basic Education Teacher's Diploma and Advanced Certificate in Education	Mathematics
	5	M	8	Basic Education Teacher's Diploma and Advanced Certificate in Education	English Second Language
	6	F	3	Bachelor's Degree in Accounting	Accounting
	7	M	8	Basic Education Teacher's Diploma	Physical Science

Table 3.1 indicates the biographical data of the participants at school 1 and shows the gender, years of experience, qualifications and the subjects taught.

The following table 3.2 shows the participants from school 2.

Table 3.2: Biographical data of the participants of School 2

School 2					
	No.	Gender	Teaching experience	Qualifications	Subject taught
Participants	1	M	8	Basic Education Teacher's Diploma and Advanced Certificate in Education	Life Science
	2	M	12	Basic Education Teacher's Diploma and Advanced Certificate in Education	English
	3	F	2	Higher Diploma in Education	Entrepreneurship
	4	M	12	Basic Education Teacher's Diploma and Advanced Certificate in Education	Mathematics
	5	M	3	Basic Education Teacher's Diploma and Advanced Certificate in Education	Accounting
	6	F	3	Bachelor's Degree in Information Technology	Computer
	7	F	7	Basic Education Teacher's Diploma, Advanced Certificate in Education and Hons Bachelor's Degree in Teaching and Learning	Silozi

Table 3.2 indicates the biographical data of the participants at school 2 and shows the gender, years of experience, qualifications and the subjects taught.

Tables 3.1 and 3.2 show the biographical data of the participants in this research study. In terms of gender five (5) females and nine (9) males participated voluntarily in this research. Fourteen (14) participants in total took part. The academic backgrounds of the participants show that eight (8) teachers had qualifications equivalent to a four year qualification in Education, three (3) participants had Bachelor's degrees in Education and three (3) of the participants held a Higher Diploma in Education. All the participants had didactic and pedagogical training in education and usually undergo continuous professional development and training for curriculum implementation when it is offered by MBEAC. The average teaching experience of participants is eight years. All participants observed were teachers teaching promotional subjects in grade 8.

3.7.4 Research Sites

The two research sites are both located in a rural area within Bukalo circuit where the community is poor. Learners from both schools are from lower social-economic class families. Both schools have electricity and have access to telecommunication services such as mobile and landline phones and internet. The provision of piped water in both school seemed to be adequate even through School 1 did not have water for two weeks due to a broken pump. School 1 seemed to be better resourced than School 2. School 1 was equipped with functional computers (15) while at School 2 most of computers were broken. Both the school buildings are old and show signs of deterioration, for example, holes are visible in the floors. There are enough desks and tables and chairs for all grade 8 learners at the two schools. The language of instruction is English and Silozi is used as a second language at the schools.

When comparing the two schools, school 1 seems to be more resourced than school 2 in terms of infrastructure (buildings and services) and human resources. School 1 is fenced with a lockable gate. There are three administration offices for staff members. The school has a garden which is watered by learners during the afternoons and evenings. The school has 23 teachers and 346 learners in total. There are 37 grade 8 learners at School 1.

School 2 is not fenced. Teachers use a classroom as a staffroom. Some teachers live close by the school, while some teachers travel about 80 km daily to their homes. The school has no garden. The school has 17 teachers and 303 learners in total. There are 32 grade 8 learners at School 2.

The section below describes the essential elements of this research which cover the data collection method in this qualitative research study.

3.8 DATA COLLECTION

Fraenkel *et al.* (2015) refer to the term data as the kind of information researchers obtain on the subject of their studies. In this research study data collection methods refer to the relevant qualitative instruments aimed at gathering information from the participants such as observations, interviews, audio-visual material, documents and reports, even collection of physical artefacts (Creswell 2009).

Maree (2007) and Creswell (2009) state that a key strong point of a case study design is the use of widespread of multiple sources and techniques in the data gathering. For the purpose of collecting useful information needed for this research, the researcher decided to use the data collection techniques or instruments lesson observations and semi-structured interviews. The researcher class observed each of the 14 teachers while teaching different grade 8 subjects for

40 minutes, and had face-to-face interviews with the teachers after observation had been conducted. The interviews lasted between 20-35 minutes.

A description of the data collection method used in this research is outlined below, starting with observation and lastly semi-structure interviews.

3.8.1 Observations

Observation is a systematic process of recording the interactive pattern of participants, objects and manifestations without necessarily questioning them or communicating with them (Maree, 2007:85). Classroom observations were used because the researcher wanted to get deep insight and understanding of the phenomenon that is being observed in the study.

During this study lesson observations were done first to prevent social desirability. If the focus group interviews were held before the observations, participants might purposefully change their teaching to adopt self-regulated strategies and that would make lesson observation less valid for the research.

One lesson of each participant was observed before the semi-structured interviews with the 14 teachers. The observation was done to determine participants' use of strategies to develop SRL. An observation schedule (**Addendum A**) for self-regulated learning strategies, based on Zimmerman's (2000) model for self-regulated learning, was used and the researcher took notes while observing to support the observation schedule. Observations were focused on participants' direct and indirect SRL strategies used, such as metacognitive strategies, planning, task analysis, learning strategies, use of various resources and reflection in their teaching. The observation schedule contained following ratings: lowest rating- Never observable (NO), Rarely observable (RO), Often observable (OB) and Mainly observable (MO) as the highest rating.

The advantages of using observation as data collecting method included the following: Observations provided the researcher with ways to check for nonverbal expression of feelings, to determine who interacted with whom, to grasp how participants communicated with one another, and to check how much time was spent on various activities. Participant observation was a method developed to obtain a holistic understanding of the phenomena of SRL under study, as objective and accurate as possible, given the limitations of the method.
By using observations and semi structured interviews the researcher was able to triangulate data and to increase the validity of the study. Observations helped the researcher to have a better understanding of the context SRL and of how teachers develop SRL.

3.8.2 Semi-structured interviews

An interview is a two way conversation in which the interviewer asks the participant questions to collect data and learn about the ideas, beliefs, views, opinions and behaviours of the participants (Maree, 2007).

Interviews are believed to provide a deeper understanding of social phenomena than would be obtained from purely quantitative methods such as questionnaires. Interviews are therefore, most appropriate where little is already known about the phenomenon studied or where detailed insights are required from individual participants (for example: few studies have focused on the teachers' perspective in developing self-regulated learning of grade 8 learners). They are also particularly appropriate for exploring sensitive topics, where participants may not want to talk about such issues in a group environment.

Interviews were held with each participant of the two selected schools after the researcher and the participant had agreed on the time and date. The researcher used an interview schedule (**Addendum B**) based on Zimmerman's (2000) model for self-regulated learning. The interviews was voice recorded and transcribed afterwards. The following was the procedure followed during the interviews with the participants:

- A brief introduction was given to the participants which explained the purpose of the research and asked the participants' consent in answering the question.
- The participants were informed about the length of the interview (20-35 minutes).
- The researcher requested participants' permission to voice record the semi-structured interviews.
- The researcher asked the participants whether they were ready for the interview.
- During the interview process the researcher asked questions to the participant and allowed them to respond to questions without obstructing them from their perspectives. The researcher listened carefully throughout the whole interview session and posed questions where clarity was required.
- After the last question on the interview schedule participants were asked whether they had anything related to self-regulated learning that they wanted to ask or say and then the researcher thanked each participant.

The semi-structured interviews provided clarity about issues that had been observed in lesson presentations and gave more in depth understanding of participants' opinions on why and how they developed self-regulated learning in grade 8 learners.

The following are advantages of interviews applicable to this research.

- *Interviews are more flexible* (Hofisi, Hofisi & Mago:2014, p. 62)

The researcher discussed with the participants and agreed on the date and time convenient to the participant. Some of the participants were interviewed during the morning session when participants had administrative periods and some during the afternoon and evening when participants were free.

- *Interviews are more likely to yield more information that the researcher hadn't planned to ask for.*

This gave the participants time to explain what was not observable in class and gave more descriptive data based on the personal accounts of information, perspective and beliefs of the participants.

Creswell (2005) further elaborates on the advantages of interviews:

- *Use of interview schedules*

The researcher had pre-planned question to ask the participants in a logical order. This helped the researcher not to omit or forget to ask a question as well as to test whether the research questions can be answered.

- *It is difficult for participants to cheat*

During the interviews with the participants, participants were hosted in an office provided by the school principal and participants were unable to copy or read something.

- *Interviews are easy to record*

This enabled the researcher to use a voice recorder and at a later stage of the research process extract the information.

Leedy and Ormrod (2010) state that the main disadvantage of the interviews is that the researcher gets different information from different people and may not be able to make the comparison among the interviewees. The researcher had to overcome the above disadvantage by ensuring that during analysis data were analysed based on the themes and sub-themes.

After the collection of data through the above-mentioned method the researcher moved ahead with the research in which data were analysed. The following section describes how data were analysed.

3.9 DATA ANALYSIS

Pomerai (2017) and Maree (2007) explain that qualitative data analysis documents are a variety of approaches, processes and procedures whereby researchers extract some form of explanation, understanding or interpretation from the qualitative data collected of the people and situations that they are investigating.In the same way, Mouton (2001) defines analysis as a “breaking up” of the data into manageable themes, patterns, trends and relationships. The author further emphasizes that the aim of analysis is to understand the various constitutive elements of one's data through an inspection of the relationships between concepts, constructs or variables. The researcher used data analysis to see whether there were any patterns or trends that could be identified or isolated, or to establish themes in the data. The main aim for this data analysis was to explore how the teacher developed the learners’ SRL.

Fraenkel *et al.* (2015) define content analysis as a technique that enables researchers to study human behaviour in an indirect way, through analysis of communication. The researcher's intention was to analyse the content, attitudes, understanding, knowledge, values, feelings and experiences of participants. With data analysis, in this study, a thematic analysis of content analysis was used as an instrument to help with the qualitative analysis data. The research data analysis required the researcher to methodologically arrange the observation notes (**Addendum D**) and interview transcripts to answer the research questions and achieve the outcome of the study.

Interpretation of data involves the synthesis of one's data into larger coherent wholes by relating one's results and findings to existing theoretical frameworks or models, and showing whether new interpretations are supported or counterfeited by existing findings. Interpretation also means taking into account opposing explanations of one's data and showing what levels of support the data provide for the preferred interpretation. Interpretation involves stating the larger meaning of the findings and personal reflections about the lesson learned.

In this study an observation data form was developed to categorize what was observed by the researcher. Data from each lesson observation were collected by using the same form with *a priori* codes to record observed SRL strategies used by participants.

In the data for this study the voice recorded semi-structured interviews were first transcribed into text in order to generate a clear meaning and understanding of the information gathered with regard to the participants’ perspectives about the concept SRL and the strategies they use to

develop it in grade 8 learners. During the transcription process the researcher was aware that failure to capture words said by participants would lead to misinterpreting data and then the research would be unsuccessful. Therefore the researcher went back and forth when listening to each recorded interview and carefully transcribed it verbatim into texts.

The next paragraph explains how data were organised, coded and presented.

3.9.1 Organizing the data

Maree (2016) elaborates that the kind of data collected (field notes, video recording and interviews, observations, etc.) tend to be very large and lengthy and require intensive examination, understanding and reading. Nevertheless, the researcher used extensive time to use a variety of data collection methods such as observations and audio recordings of interviews. The researcher also spent extensive time to transcribe and organise the data in files. For each participant the researcher created a file with his/her contact details and the data collected through observations and interviews under the school (1 or 2) with a participant number. For example, Participant 1, School 1 or Participant 3, School 1. The letter “I” in the data transcribed indicates that the data was from semi-structured interviews. The observation schedules were filed under the following classification for identification after data collection: the participant number, school, class, subject, date and time of observation. The same type of coding was used during the observations: P3S2O indicates Participant 3 from school 2. The “O” indicates data from the observations

3.9.2 Coding of data

The researcher then started with the coding process of the data. Maree (2007) defines coding as a process of reading cautiously through your transcribed data, line by line, and separating these into significant analytical units. Maree (2007) suggests that the researcher pay attention to such elements as noticing, collecting and reflecting on the information that has been given by the participants. In this study the intention of the researcher was to identify patterns that emerged from the responses of those who answered the questions that had been distributed. Coding supported the researcher to quickly obtain or retrieve and gather the whole text and other information related to thematic idea, which was sorted and examined and compared. Categories of information were examined for contradictions, similarities, relationships.

The researcher coded the interviews (**Addendum E**) and observation notes 1-14. These categories or responses referring to SRL strategy use were identified and placed under predetermined sub-themes from literature and new themes created by the researcher (Saldana, 2009:5). The sub-themes were categorized under main themes. The three phases in Zimmerman’s (2000) model were used as themes, namely the forethought, volition and self-

reflection phases. Participants' responses were coded under the processes and sub-processes of each phase for example goal setting, task analysis etc.

3.9.3 Presentation of data

The data collected were constructed by means of the data collection process and formed by what had been collected from semi-structured interviews and lesson observations. Data were organized into comprehensible descriptions under sub-themes and main themes created though content analysis and a priori codes from literature. In this study the analyzed and interpreted data are supported by verbatim quotes of all participants. In the triangulation of data the SRL strategies which were pre-determined is supplemented by the observation notes which the observer made during the classroom observations to supplement the observation schedules. The data from the lesson observations were presented in narrative text and were categorised into lower demonstration of SRL development and average demonstration of SRL development (**Addendum F**).

3.9.4 Interpretation of data

The empirical section of this study consists of qualitative semi-structured interviews and observations of lessons. Table 3.3 shows the themes and sub-themes generated from semi-structured interviews. The following themes and sub-themes were generated from the semi-structured interviews and observations based on Zimmerman's (2009) model for SRL:

Table 3.3: Themes and sub-themes from semi-structured interviews

Self –regulated learning	
Theme 1: Perspectives about SRL	
Sub-themes	• Awareness of the concept SRL
	• Participants' understanding of the concept SRL
	• Value of SRL for academic learning
	• Training to use and develop SRL
	• Perspectives about teachers' roles in developing SRL
	• Perspectives about social and physical environment influences on the development of SRL

Theme 2: Perspectives of how SRL is developed	
Sub-themes: SRL development in the forethought phase	• Developing strategic planning
	• Developing goal setting
	• Developing motivational beliefs
	• Developing self-efficacy beliefs
	• Developing goal orientation
	• Developing task interest
	• Developing outcome expectations
Sub-themes: SRL development in the Volitional phase	• Developing task strategies
	• Group work
	• Developing time management
	• Developing self-observation of learning
	• Developing help-seeking
	• Developing environmental structuring
Sub-themes: SRL development in the self-reflection phase	• Opportunities for self-evaluation
	• Reflection
	• Self-satisfaction
	• Building realistic attributions for success or failure
	• Adoption of teaching strategies

The table 3.3, above indicates the themes and sub-themes generated through the teachers' responses based on Zimmerman (2000); Zimmerman & Moylan's (2009) model. The first theme deals with the teachers' perceptions about SRL with six sub-themes. Secondly, the second theme explores the perspective of how SRL is developed with three sub themes. Sub-theme 1, discusses the SRL development in the forethought phase with seven strategies participants used to develop

SRL. Sub-theme 2 deliberates on SRL development in the volitional phase with six strategies the participants' mentioned. Sub-theme 3 reflects on the SRL development in self-reflection with five strategies participants mentioned. The themes and sub-themes created a priori from Zimmerman and Moylan's (2009) model and the literature review.

3.10 TRUSTWORTHINESS

In order to enhance the trustworthiness of the research the researcher used multiple data collection methods namely lesson observations and semi-structured interviews with participants. The following strategies were used to ensure trustworthiness in this research (McMillan and Schumacher, 2001). Sufficient opportunities were provided for participants to contribute to the study. During the research process, the research spent more time with the participants whereby classroom observation lasted for 40 minutes for each participant and interviews between 20-35 minutes depending on the participants' responses. The researcher conducted meetings with the participants to welcome and motivate them to participate. The research was conducted in a natural setting (that is the schools where the participants teach) to prevent an artificial setting and to rather promote the reality of their real life experiences. The classroom observations and interviews were conducted at the schools where the participants were teaching.

In the discussion of findings verbatim quotes of participants were provided as substantiation of conclusions made by the researcher. The researcher was aware of his own assumptions and biases relating to data collection and data analysis. The aim of the research as well as its role in the study was explained to participants during the meeting. Participants were consulted to determine specific dates and times for interviews and lesson observations. The research made sure that he obtained the grade 8 time-table and used it to draw up suitable dates, times and periods for observations and interviews.

Triangulation by means of more than one data collection method was used to ensure the researcher of the trustworthiness of this findings of the study. The purpose of the triangulation was to obtain different, but complementary data in the same study to best understand the research problem. The researcher used more than one data collection method. Observations and interviews were used. A voice recorder was used in order to collect data from interviews. Triangulation was further enhanced in Chapter 4 whereby the researcher was able to triangulate the data from different data collection methods to cross-examine what participants said (interviews), what participants do in reality (observation) and what is written by others (literature).

Member checking was done to ensure the accuracy of transcriptions and interpretations of data. This was done to ensure that the researcher is always honest on what is being carried out. The researcher ensured that the data recorded (audio), the transcriptions and interpretations of the

data were made available to the research participants and the school. Multiple codes were used with the data analysis. The researcher used a thematic approach of a data content analysis.

3.10.1 Credibility

In order to enhance credibility, the researcher used the following techniques: prolonged engagement with participants, persistent observation, triangulation, peer debriefing, and member checking with the participants. Prolonged engagement was carried out by the researcher in that the researcher visited the schools several times in order to familiarise himself with the participants to build trust and overcome the distortion. This lasted for a period of about three months from the date the researcher first visited the Schools to explain the research topic until the time interviews were conducted.

Persistent observation: the researcher spent much time to study the research topic based on the experiences and research carried out by other researcher. This was carried out through the literature review whereby the researcher spent time gathering information and making meaning of what is being studied.

Triangulation: the verification of the findings was done through using multiple sources of information and data collection methods such as observations and semi structured interviews. Different sources were used and 14 participants were observed and interviewed.

Peer debriefing: the researcher conducted a meeting with the participants at all schools which comprised the principal, the Head of Department and the teaching staff to ensure that the participants could ask question related to the research, school, methodology and research topic. The researcher further ensured that the right of each participant to withdraw from the research or refuse to participate by giving data was explained, and one participant did refuse to take part.

3.10.2 Transferability

According to Fraenkel *et al.* (2015), transferability refers to the generalization of the study findings by the end user rather than the producer of the research. Therefore to ensure the transferability, the researcher hopes that the research finding on the research topic from the two Schools is transferable to other settings in rural schools of Namibia. A thick descriptive of the perspective of teachers regarding the development of self-regulated learning was carried out.

3.10.3 Conformability

Conformability refers to the quality of the results produced by the researcher in terms of how well they are supported by the participants who are involved in the research study. Reference was

made by the researcher to the literature and finding it in order to interpret the information from the participants. The researcher used procedures for checking and rechecking the data collected, and analysed data during the entire research. After the research, the researcher carried out a data audit which checks the data collection and analysis procedures and makes judgements concerning the potential for bias or distortion.

To ensure confidentiality throughout the process interviews were held in a venue where there was privacy. Furthermore, the researcher ensured that participants were not identified by their names during data capturing and dissemination pseudo names and codes were used to ensure that no link can be made between their person and what has been said. The captured data were password-protected when stored electronically and locked in office as a hard copy. The researcher transcribed the recordings of the interviews and also signed an agreement not to discuss what had been said in the interview and what had been observed in the lesson presentations.

3.11 ETHICAL CONSIDERATIONS

The researcher applied for permission to conduct the study as acquired from the Ethics committee of the Faculty of Educational Sciences of the NWU. The researcher was issued with the Ethical Approved Certificate to conduct the research (Ethics No. NWU-00184-16-A2) (**See Addendum G**)

The researcher requested permission to conduct the research from the Directorate of Education in Zambezi Region. A written request letter was sent to the Director of Education asking for his approval. An approval letter to carry out the research with Zambezi region was issued from the Directorate of Education (**See Addendum H).** The researcher used the Ethical Approved Certificate and approval letter from the directorate to request principals of the two research schools to request permission to carry the research in their schools. An approval letter was issued from the school principals of the two school to the researcher **(See Addendum I).**

The researcher requested a meeting through the office of the principals to meet with the teachers. During this meeting the researcher explained to the teachers about the research study and the ethical considerations such as their voluntary participation and the right to withdraw at any stage of the research. Informed consent was obtained from the participating Grade 8 teachers (**See Addendum J**). The researcher then began to collect data over the specified period issued by the University.

The lesson observations were conducted on the school premises of the two schools and more specifically in classrooms of Grade 8 teachers. The individual interviews were conducted in the morning or after school hours (afternoon and evening) in an unoccupied office provided by the

principal. Both schools had controlled access to their premises, to ensure people's safety on these premises and were certified to deal with crisis situations that might occur as prescibed by MBEAC. The researcher also assured the participants about the confidenciality of the research. The names of the participants were not reviewed or disclosed to anyone at any stage of the research process. The researcher explained to the participants that during the interviews session participants were referred to as participants 1, 2 or 3 in order to hide their identity.

The researcher carried out interviews within the school premises to ensure the safety of the participants, and because they were familiar with the veues, which were also easily accessible. The researcher ensured that these premises complied with basic standards for comfort and safety; for example, the interview rooms were clean and had well ventilated windows, with two chairs and a table for the researcher and participant. Since most participants were accommodated within the school premises, no transport was needed or requested in this respect and the particiants who had to travel out were given the first opportunities to be interviewed.

The researcher noted the risks related to participants experiencing frustration due to the time loss resulting from individual interviews with the researcher. To address this risk, the researcher had set the dates and time in advance so that participants could know when they would be involved. Participants could feel uncomfortable when being observed in class by the researcher. To address this risk, the researcher arranged a meeting with participants, prior to the lesson observation, to give them opportunity to familiarise themselves with the researcher and the process that is to take place. The researcher also requested to visit participants' classrooms, meet the learners and to briefly explain the process that took place during lesson observation. The researcher further requested a copy of grade 8 time-table and informed the participants of the date, time and period for observation.

In the unlikely event of some form of discomfort occurring as a direct result of participants' taking part in this research study, after the lesson observations and interviews, owing to what has been said or done by the researcher, participants were requested to feel free to immediately notify the researcher. In this particular situation, there was no discomfort reported the researcher. The participants were informed that whenever they felt that they could not continue with the research process, they had the right to withdraw.

Lastly, the researcher informed the participants that all the data collected during the research would be stored electronically, protected by a password known only to the researcher.

Hard copies of data will be kept safe in the office of the researcher while the research is in progress. On completion of the research, the data will be stored with all hard copies in the researcher'soffice for a period of seven years.

3.12 CONTRIBUTION OF THE STUDY

This research has twofold significance in terms of its influence (direct and indirect) on SRL. The first deals with the research participants: the teachers had direct benefits whereas they become aware of their own perceptions of self-regulated learning and its value for academic achievement. Teachers will be in a position to reflect on how they develop or enhance learners' use of self-regulated learning in the grade 8 subjects they teach. This research project also might stimulate discussions with other teachers about the position, importance and usefulness of self-regulated learning to improve grade 8 learners' academic performance. Findings from this project serve as instrumental for reflection and offer some ideas for changing practice. Insight into teachers' own beliefs about SRL and teaching for SRL gives the priority to the development of such practices in their classrooms.

The indirect benefit was that schools can become spaces in which learners learn effectively and do well when their SRL skills are developed. The use of SRL skills by learners would enable them to cope with the influence of their social environment and the demands of SRL.

3.13 SUMMARY

In this chapter the research design, methodology and paradigm were deliberated on. The researcher also described the qualitative research, case study, population and sampling methods as well as the data collection and ways of analysing data. The ethical considerations were also presented.

The next chapter, Chapter 4, discusses the data analysis and presentation of findings.

CHAPTER 4: DATA ANALYSIS AND INTERPRETATION

4.1 INTRODUCTION

In Chapter 2 the concept self-regulated learning (SRL), different models and philosophical orientations to self-regulated learning as well as the development of self-regulated learning through instruction (SRL) which formed the theoretical and conceptual framework for this study, were discussed. In Chapter 3 the research methods used in this study was presented. The following were discussed: research paradigm, qualitative research method, and a case study design. Chapter 3 further presented the sampling strategy, data collection methods, data analysis, trustworthiness, and the ethical issues. As revealed in Chapter 3, fourteen lesson observation and semi-structured interviews were conducted with fourteen teachers in two rural schools. In the first place, data collected through lesson observation were analysed and categorised based on the occurrence and non-occurrence of observed development of SRL in grade 8 learners (Chapter 3 Addendum A). Secondly, the data collected through semi-structured interviews were transcribed and analysed through content analysis (Chapter 3 addendum B).

Chapter 4 presents the analysis and interpretation of empirical data of this study. The main purpose of this study (§4.2); the population and sample are described (§4.3); the analysis and interpretation of the qualitative data (§4.4) will be deliberated.

4.2 THE AIMS AND RESEARCH QUESTIONS OF THE EMPIRICAL RESEARCH

The main purpose of this research was to explore how teachers develop SRL of grade 8 learners' in two rural schools in Namibia.

The subsidiary aims of the study were to explore:

- To determine teachers' perspectives about the concept SRL and its value for academic success;
- To determine whether teachers are aware of the concept SRL and whether they are trained to use and implement SRL strategies;
- To determine which SRL strategies teachers use while teaching different grade 8 subjects.

To address the aims of the study, the following main research question with three sub-questions were posed.

4.2.1 The main research question:

How do teachers develop SRL of grade 8 learners?

In order to ensure that main question was explored, the researcher decided to split the main research questions into sub-research questions as follows:

4.2.2 The sub-questions

- What are teachers' perspectives about the concept SRL and its value for academic success?
- Are teachers aware of SRL and were they trained to use and implement self-regulated learning strategies?
- Which self-regulated learning strategies do teachers use while teaching different grade 8 subjects?

4.3 SAMPLE

This research used a sample of 14 grade 8 teachers from two different rural schools in Bukalo circuit within Zambezi region which is located in the north-eastern part of Namibia, who were currently teaching a subject in grade 8 (§3.7.1). Convenience sampling was used to choose the two rural schools within Bukalo circuit. The two rural schools were chosen by the researcher as research sites were easily accessible to the researcher, and participants were conveniently available for this study.

Purposive sampling was used to select the fourteen grade 8 teachers. They were selected because they met the selection criteria and they were able to provide rich, descriptive information to answer the research questions of this study.

In the next section the process of data analysis will be described.

4.4 PROCESS OF ANALYSIS OF QUALITATIVE DATA

Maree (2016) describes the data analysis processes as a continuous and frequentative process of data collection, processing, analysis, and reporting. The different processes are interwoven and not purely a number of sequential steps.

The data analysis of the semi-structured interviews will be described first and thereafter the data analysis of the observations will be described in (§4.4.2.)

4.4.1 Data analysis of the semi-structured interviews

The following steps were used to analyse the audio recorded data of semi-structured interview (Leedy & Ormrod, 2010, p. 153):

- **Step 1:** Data transcribing

The responses of 14 participants collected through interviews were prepared and transcribed verbatim from speech into words.

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

Transcribed responses of interviews were analysed. The participants' data were broken apart, divided from larger pieces into smaller parts. These processes of data processing required the researcher to identify the themes and sub-themes, and also the addition of notes to the data.

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

The researcher was required code the data, to identify categories, themes and sub-themes.

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

The researcher was required to interpret the data through writing and illustrations in tables.

- **Step 5:** Validation of the data

The researcher was required to compare the data with own explanations, crystallisation and the validation of the data.

In this research study, the researcher used content analysis to analyse data. Vitouladiti (2014), (cited Gray and Densten, 1998; Shoemaker and Reese, 1996) defines content analysis as a research methodology where the researcher examines textual data for patterns and structures, singles out the key features to attend to and develops categories in order to capture the meaning of the text meaning. A qualified and independent person was used to check that the interviews were transcribed correctly to enhance the trustworthiness of this study. The researcher also gave participants the opportunity to read through the transcribed data to verify whether the transcribed was a true and accurate version of what they had said.

The researcher repeatedly read through the fourteen participants' transcripts to get a deep understanding of the data and to look for patterns and differences in what participants said. Themes and sub-themes were identified *a priori* from literature on SRL, but mainly from Zimmerman' s three phase model for the development of SRL (2000) and the adapted model for

SRL from Zimmerman and Moylan (2009). Participants' responses referring to their understanding of the concept SRL, SRL value for academic success, and strategies participants use to develop SRL in their grade 8 learners were categorised under the predetermined themes and sub themes (Saldana, 2009:12). Seeing that the theoretical and conceptual framework in the study is based on Zimmerman's (2000) three phase SRL model, the researcher decided to use the three phases in Zimmerman's (2000) and Zimmerman & Molyan (2009) model as sub-themes, namely the forethought, volition and self-reflection phases. Participants' responses were coded under the processes and subprocesses 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 quickly obtain or retrieve and gather the whole text of participants and other information related to the thematic idea which was sorted and examined and compared (Saldana, 2009:12). Categories of information were noted and identified, and subsequently the collected data were examined for contradictions, similarities, relationships.

The data findings were interpreted and the researcher was able to judge and draw conclusions based on the theoretical knowledge of SRL, empirical data and his understanding of the Namibian education context. Finally, the data from the semi-structured interviews were triangulated by comparing them with data from the lesson observations.

Table 4.1, below shows the themes and sub-themes created and generated 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) and literature.

Table 4.1: Themes and sub-themes generated from semi-structured interviews

Self –regulated learning	
Theme 1: Perspectives about SRL	
Sub-themes	• Awareness of the concept SRL
	• Participants' understanding of the concept SRL
	• Value of SRL for academic learning
	• Training to use and develop SRL
	• Perspectives about teachers' roles in developing SRL

	• Perspectives about social and physical environment influences on the development of SRL
Theme 2: Perspectives of how SRL was developed	
	Teaching strategies
Sub-theme:1 SRL development in the forethought phase	• Developing strategic planning
	• Developing goal setting
	• Developing motivational beliefs
	• Developing self-efficacy beliefs
	• Developing goal orientation
	• Developing task interest
	• Developing outcome expectations
Sub-theme:2 SRL development in the Volitional phase	• Developing task strategies
	• Developing time management
	• Group work
	• Developing self-observation of learning
	• Developing help-seeking
	• Developing 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
	• Adopting teaching strategies

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

4.5 DISCUSSION AND ANALYSIS OF QUALITATIVE DATA

The data were collected through semi-structured interviews and lesson observations. Data from interviews were organized into understandable descriptions under sub-themes and main themes created though content analysis and *a priori* codes from literature. The data analyzed and interpreted are supported by verbatim quotes of all participants. In the triangulation of data, the SRL strategies which were pre-determined is supplemented by the observation notes which the observer made during the classroom observations to supplement the observation schedules.

The results of findings on teachers' perceptions on the development of grade 8 learners SRL collected through interviews will be discussed first. Thereafter, the data findings from lesson observation will be discussed. The researcher used the verbatim quotes, printed in italic to present the rich comprehensive and understandable descriptions of the teachers' (participants) perceptions and their experiences about the development of SRL. The following reference codes were placed after the verbatim quotation to represent the participants and the school, for interviews: *P1S1I means Participant 1 from school 1*. The "I" - indicates data from semi-structured interviews. The same type of coding was used during the observations: *P3S2O indicates Participant 3 from school 2*. The "O" indicates data from the observations

4.5.1 Themes and sub-themes generated from the semi-structured interviews

To explore participants' perspectives of the concept *self-regulated learning* they were asked: what they understand under the term self-regulated learning, why they think SRL has value for academic success (or not), whether they were trained to develop SRL in learners, and what roles teachers have to play in the development of learners' self-regulated learning.

The concept *perspective* refers to a particular way of considering and thinking of about something. The six sub-themes generated under the main theme of perspectives of SRL are: (1*)* ***awareness*** of the concept SRL (2) participants' ***understanding*** of the concept SRL, (3) the ***value*** of SRL for academic learning, (4) ***training*** to use and develop SRL (5) perspectives about ***teachers' roles*** in developing SRL (6) perspectives about ***social and physical environment influences*** on the development of SRL

The discussion below offers the responses that generated data to interpret participants' perspectives about SRL in order to answer the first and second sub-questions (§ 4.2.2).

4.5.1.1 Theme 1: Participants' perspectives of SRL

Sub theme 1: Awareness of the concept SRL

In order for teachers to develop SRL in learners, they need to be aware of SRL concept to ensure the effective implementation of the curriculum. Zimmerman (2000) reports that sometimes teachers are unaware of SRL and this could prevent them from developing SRL in their learners (§2.1). By being aware of SRL, teachers will become aware of the level of self-regulated learning in learners. Awareness of SRL helps teachers to plan more effectively and to decide on the type of teaching and learning strategies to use. In this study the majority of the participants indicated that they are familiar with the concept SRL: *We were workshopped what we should do to learners. (P5S2I, P7S1I, P2S1I and P2S2I).* The concept is reflected in circulars from MEAC, the Regional directorate of Education of their region and the learner-centred approach that is followed in the Namibian curriculum. Only three participants indicated they had never heard of SRL:

Not yet. (P4S1I), (P6S2I).

…it is for the first time. (P7S1I).

Participant responses indicated that most of them are aware of the concept SRL as they relate it to the learner-centred approach and strategic learning. Even the three participants who said they are not aware of concept could still relate it to learner-centred teaching and learning of the Namibian curriculum they implement.

Sub-theme 2: Participants' understanding of the concept SRL

The majority of participants described SRL as a process or as actions or strategies learners use when they learn. Some participants tried to explain their understanding of the concept by describing characteristics of self-regulated learners. The following responses summarize participants' understanding of SRL:

> *Learners have to do much of the work in terms of learning and the teacher is just facilitating. (P1S2I)*
>
> *…it is more of learners taking charge, being in charge of their own learning instead of the teacher spoon-feeding learners (P4S2I).*
>
> *As responsible learners, they are accountable, because they know the purpose of why they are in school and they are able to motivate themselves (P7S2I)*

The finding revealed that most of the participants have a general understanding of the concept SRL. The descriptions participants gave of the characteristics of self-regulated learners concur with the descriptions of Zimmerman, 1990, 2000; Bembenutty, 2015; Moseki & Schulze, 2013 and Schunk, 2012) (§2.2).

The next paragraphs covers the sub-theme on participant's perspectives about SRL.

Sub-theme 3: Value of SRL for academic learning

The following are a few responses from participants on the academic value of SRL:

> *It has to be regulated in policies, syllabuses and most of the circulars because it encourage making the learner to become accountable and responsible. (P7S2I) and (P4S2I)*
>
> *…it gives the learners confidence…also it gives a sense of independence (P6S1I).*
>
> *…they become self-motivated, accountable, and responsible for their own learning. (P7S1I)*

The responses revealed that participants believe SRL is valuable for the development of confident, knowledgeable learners, as well as for their academic achievement. They also indicated that SRL helps with the development of lifelong learners. (§2.7). These perspectives participants about the value of SRL are supported by Zimmerman (2000, 2013) and Moseki and Schulze (2013) (§2.10). The participants further indicated that SRL has long-term value because it enable learners to develop knowledge and skills that will help them in future studies and in their careers. This perspective of participants are supported by Bandura (2006) who noted that the development of SRL skills that equips learners to manage their social behaviour and to develop lifelong learning skills (§2.7).

Sub-theme 4: Training to use and develop SRL

Training to use and develop SRL plays an important role in the teaching profession. Training helps teachers to be aware of how they can use and develop SRL. The teachers who received training possess both theoretical and practical knowledge on how to use SRL in their own teaching strategies and to develop SRL in their learners. Ferreira and Simão, (2012) argue that teachers should be trained to teach using SRL strategies, which will help learners to develop general learning skills that are cross-curricular, applicable to any academic subject (§2.4.2).

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

> *Yes, we received the training, both at the college and at university. (P5S1I).*
>
> *I would say when I was still been trained as a teacher. (P4S2I).*
>
> *I have been trained …during our study time at college (P1S2I).*
>
> *We were workshopped what we should do to those kinds of learners. (P5S2I, P7S1I, P2S1I and P2S2I).*
>
> *…we have CPD* (Continuous Professional Developmental) *programmes at our school (P6S1I)*

Five participants indicated that they did not receive training and do not know how to use or develop SRL as professional teachers in their grade 8 learners:

> *On that one let me not tell lies, not yet. (P4S1I)*
>
> *I did not receive any training, but I received information about it. (P3S2I, P3S1I, P6S2I, P1S1I).*

This sub-theme revealed that the majority of participants indicated that they were trained to develop SRL in their teacher training courses and through workshops conducted by the Department of Education:

Sub-theme 5: Perspectives about teachers' roles in developing SRL

Teachers play a major role in developing and enhancing SRL in their classrooms as they interact with learners. The participants' responses revealed their perspectives of their roles in developing SRL in their learners:

> *…you come in as facilitator … you instruct them on what to do... (P5S1I).*
>
> *…as teacher your role is more of facilitating them, guiding them, everything is from learners, themselves. (P1S1I).*

Another participant added that:

> *…a teacher is a mentor and guide, so we have to guide learners through this process because they need to be helped. (P7S2I).*

The participants also indicated that their roles have to do with motivating and encouraging learners to take responsibility for their own learning by using assessment:

> *…motivate the learners by giving them more work and time to do their work. Also, give a chance to learners to learn. (P6S2I).*
>
> *…teachers trying to encourage learners to take care of their own learning seriously by advising them, try to encourage them to try to work on their own…(P2S2I).*
>
> *Because they still have that mind of the primary section so they are too difficult to handle, they need most of my time to be with them, of teaching and giving things like activities after activities corrections like that most of the time. (P3S1I, P3S2I).*

Analysing the responses from participants, it is evident that the majority of the teachers are aware of the roles they should play to foster the learners' Self-Regulated Learning. Most participants perceive their roles to be those of a teacher with knowledge, as a facilitator, guide, mentor, supervisor using encouraging words and monitoring learners of learners' progress. Two participants indicated that although they support the development of SRL, it is a difficult processes

that takes up a lot of teachers' time. These perspectives of teachers' roles in the development of SRL are supported by Olakanmai et al. (2011) (§2.7) as well as by Ferreira and Simão (2012) (§2.10). However a few participants still labour under the wrong impression that they only have to tell learners what to do and learners should then be able to do it. It can be concluded that participants who hold such perspectives, for example *(P5S1I and (P1S1I),* assume that all learners are equally self-regulated. They do not understand the roles they should play through direct instruction of SRL skills, or modelling of SRL skills to develop their learners academically.

Sub-theme 6: Perspectives about social and physical environment influences on the development of SRL

The literature revealed the social and physical environments where learners learn influence their self-regulated learning (Schunk, 2013). The social environmental includes the people a learner interacts with such parents or guardians, peers and teachers. The physical environment on the other hand includes the infrastructure such as availability of chairs, tables, chalkboards in the classroom, the neatness of the classroom and the geographical location of the school. Below are the few verbatim quotes from the participants on how the social environment of their grade 8 learners influences their development of SRL:

> *… home or peer friends they meet with or they are involved in does bad things and that will affect them (P7S2I)*
>
> *…parents play a significant role, with us teachers also we need to like how we can encourage learners to be motivated (P6S1I)*
>
> *... People that are educated can have a good impact on the learner because they have people to look up too. (P6S2I).*
>
> *…if learners are come from a society where by they experience a lot of things which does not encourage education, it will be difficult in the class as learning starts from there, they learn different things (P1S2I), (P7S2I).*

Participants' responses also revealed that they perceive the socio-economic situations of grade 8 learners to have an effect on learners' willingness to become self-regulated.

> *… try to mock that learner in one way or another he/she will not feel secure in class, I think yes that learner will be destructed that learner will not be comfortable because of her dirty clothes… (P7S1I)*
>
> *…learners are not motivated based on where they are coming from, experience on how they are raised, either poor or rich. …motivate them to be good or poor….depends on how the child is raised in that house and how is the community itself. (P5S2I)*

From the responses of participants it can be concluded that they understand the influences a learner's social environment can have on his/her SRL. This finding is supported by Zimmerman (2000), Schunk et al., (2014) and Woolfolk (2013) (§2.3.7).

The following responses encapsulate participants' perspectives of how the physical environment influences the development of grade 8 learners' SRL:

> *…I think most of the learners cannot study on their own because of the environment. Our school is surrounded by bars … a lot of music even during study time… (P3S2I)*
>
> *Some schools are located far away from towns. Some are located in nearby beer stores (taverns) and that affects learners. (P7S2I)*
>
> *...what can discourage them is the classroom arrangement it could be one of the factors…depends on how the class is arranged…lines or…groups. (P2S2I),*
>
> *…the school environment itself I wish we could have curtains for privacy and concentration, we have learners with short-term concentration, and maybe they get bored and start to look outside through the window. (P7S1I)*

The responses above are supported by Zimmerman (2002), (Panadero & Alonso-Tapia, 2014) who asserts that SRL is best developed in structured, conducive learning environments where teachers create expectations for learning to attain positive results (§2.4.5.2).

Participants further revealed that the negative contributing factors on learners SRL, in the Namibia educational context, include poor education levels of parents to support learners at home, poverty, and negative behaviour of teachers towards learners.

In the second theme discussed below, participants' perspectives of how they develop SRL in their grade 8 learners were analysed and interpreted.

4.5.1.2 Theme 2: Perspectives of how SRL is developed

4.5.1.2.1 Sub-theme 1: SRL development in the forethought phase

The participants indicated in the semi-structured interviews, that they use the following SRL strategies: strategic planning, goal setting, motivation, self-efficacy, goal orientation, task interest and outcome expectations. All the previously mentioned strategies form part of the processes and sub-processes in Zimmerman's model (§2.4.5.1). Task analysis is a process in Zimmerman's model, but none of the participants' responses referred to how they teach learners task analysis as a SRL skill.

Strategy 1: Developing strategic planning

The following responses indicated how participants perceive themselves to develop strategic planning in their learners:

> *…I encourage my learners to make their personal time-table (P3S1I)*
>
> *…before the exam, I ask learners what mark you want to get and what they obtained then they target for next term. Then from there they will plan their goals and objectives, and what they want to be in future. (P5S2I).*
>
> *…I identify those who cannot plan on their own and guide them. I usually use discussions.I call that learner then we sit I explain how he can manage do some of the things (P1S1I)*
>
> *Like for assignments I normally give clear instructions because without clear instructions someone cannot go through (P4S1I).*
>
> *…I ask them to have a plan on the piece of a paper whereby they will indicate the time frame let me say from this time to this time what should I do (P4S1I)*

Zimmerman (2011) states that strategic planning involves the selection of actions and strategies to complete learning tasks in order to succeed in the task (§2.4.5.1). This theme revealed that participants guide learners who do not know how to plan, recommend them to have timetables, and to set goals to when they plan. Participants also give clear instructions and explain the assessment criteria, requirements and expectations ahead of the assessment task. These strategies participants use to develop the SRL skill of planning are supported in literature (Simão, Duarte & Paula (2008); Ramdass and Zimmerman (2011) (§2.7). 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 (§2.10). However, none of the participants mentioned how they make learners aware to plan for resources, which learning strategies they will use to complete tasks, or with whom, and where they will study.

Strategy 2: Developing goal setting

Zimmerman (2000) indicates that goal setting is an essential SRL skill to achieve academic success (§2.4.5.1). The purpose of goal setting is to ensure that learners set the standard and choose the appropriate strategies to apply to attain set goals. In the Namibian education context, documents such as the School Self-Evaluation (SSE) and Teacher Self-Evaluation Instruments (TSE), goal setting is referred to as academic performance target setting. Many participants from the two schools indicated that they teach and assist their learners in goal setting by guiding them and making the requirements of tests and examinations clear beforehand:

> *…every beginning of the term each learner sets his/her targets (P4S2I).*
>
> *I give them a form set by the school, we guide them to set target (P5S1I, P7S1I,)*

I always tell them first what is expected of them before setting a test or examination (P4S2I).

The participants from School 2 explained that it is each subject teachers' duty to guide and facilitate the process of goal setting and to ensure that learners complete the target forms in their presence. Participants from School 1 indicated that the Life Skills teacher (sometimes referred to as the teacher counsellor) is tasked with the responsibility of goal or target setting instead of the subject teacher:

…mostly the Life Skills teacher who does the target setting by filling-in the target forms (P6S1I, P3S2I, P3S1I).

Most of the participants indicated they teach learners to set short and long-term academic goals at the start-off of the year or each term. The participants revealed that they use the prescribed target forms from NIED when setting long-term goals with their learners. Moreover, through goal setting, learners become aware of their expectations and become motivated academically (§2.4.5.1). The literature further revealed that, as learners set goals and attain these, they develop high self-efficacy beliefs, learn to self-evaluate their progress and they also improve their abilities to self-regulate their academic skills (§2.4.5.1). Through goal setting the participants assist learners to map out their direction and deploy certain strategies to foster their achievements (§2.6); (§2.9).

Strategy 3: Developing motivational beliefs

Teachers use motivation to encourage and to inspire learners to work towards attaining their goals. Most participants indicated they expect learners to be intrinsically motivated, but they do use extrinsic motivation to develop SRL skills in learners. The following are a few of their responses:

…I think that it should be from within the learner, self-motivation. The teacher should find a way to tell learners or encourage them to be self-motivated (P6S2I)

…by encouraging them, motivating them and try to show them which one is the right direction, to have positive-esteem. I am quite sure they can realise their goals that will keep them motivated…try to make learners realise the importance of learning and other things like say ask learners to share goals and objectives (P2S2I).

Participants' responses indicated they acknowledge learners' good work, praise them and encourage them to work hard. Participants also explain to learners the value of education and give them time to talk about their dreams and goals. The findings are supported by literature that states that learners who are motivated become committed towards achieving their tasks and demonstrate intrinsic interest in learning (§2.2).

Strategy 4: Developing self-efficacy beliefs

Self-efficacy is regarded as the learners' beliefs about their capabilities to carry out a task.

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

> *…acknowledging their work they did well, you tell them well done, excellent or you (P3S2I)*

This sub-theme revealed that most participants develop self-efficacy beliefs through positive feedback about learners' capabilities and progress. They praise learners for work well done, because they believe it keeps the learners motivated. Puustinen and Pulkkinen (2001) concur with this way of developing self-efficacy beliefs. They indicate that learners who are self-motivated possess high levels of self-efficacy and take responsibility for their own successes and failures (§2.2), and those who experience learning problems demonstrate low levels of motivation (§2.3.5).

Strategy 5: Developing learning goal orientations

In literature goal orientation is described as the reasons why learners engage in learning tasks and performance behaviour (§2.4.5.1). Self-regulated learners have a mastery or learning goal orientation rather than a performance goal orientation. The following responses indicate participants' perspectives of how they develop learning goal orientations:

> *…when I am going to deliver the subject, what do you want your learners to know? What exactly do you want them to know at the end of the lesson? (P2S1I)*

> *…now it will help them as guideline to know where they are going. (P1S2I).*

The other participant indicated that:

> *…aim high, set targets, and strive to achieve them (P4S2I)*

> *I used to tell them to aim high when they set targets (P5S2I)*

The strategies participants use are supported by literature. It is evident that participants develop learning goal orientation by helping learners to focus on their learning goals, by telling them to set high targets and to strive for success. Learners with learning goal orientations do not give up easily, have intrinsic interest in learning, and put a lot of effort in their own learning to overcome failures (2.4.5.1).

Strategy 6: Developing task interest

Task interest helps to develop and improve SRL, because if learners have enthusiastic, well prepared teachers, are interested in learning tasks they persist and work harder when they experience difficulty. The following are responses from participants to explain how they use task interest to develop SRL in their learners:

> *Design of activities that arose the learners' interests…motivate them, encourage them (P7S1I)*
>
> *…learners need to be given projects, research to carry out, because they just love that skill…research to write …allow learners to write the school newsletters, to write some poems and even to conduct assembly. (P5S2I).*
>
> *The teacher's confidence, if the teacher is confident in lesson, learners will perform to the level of their ability and enjoy what they are doing (P4S2I)*

This sub theme revealed that some participants know how to use a variety of interesting, novel learning tasks to keep learners motivated and focused on their learning. This strategy of participants is supported in literature by Zimmerman (2013) and Schunk et al. (2014) who concur that when tasks are thought-provoking and relevant to learners' everyday lives, they become motivated to achieve their learning goals, develop learning goal orientations, become more self-regulated and so improve their academic performances (§2.3.2; § 2.10; §2.4.5.1).

Strategy 7: Developing outcome expectations

The literature defines outcome expectations as the learners' personal beliefs about the positive results of their learning process. Participant responses indicate that they make their learners aware of outcome expectations by giving them hope, by letting them focus on what they want to become one day and by reminding them they can escape from of their difficult socio-economic realities to keep them motivated:

> *…they should know what they want to become in future, it helps them. I think I help my learners through career guidance, it helps them a lot. They know what to do and when; in which subject they should concentrate much and especially also they should know what they would want to become in future it helps them (P1S2I)*
>
> *… through motivating learners, telling them the future ahead, tell them the past, tell them their reality (P5S2I)*

Learners with high self-motivation beliefs and self-efficacy on their learning task tend to have high outcome expectations (§2.3.5; §2.10; §2.2.5.1).

In the next section the second sub-theme of SRL development in the performance or volitional phase will be discussed.

4.5.1.2.2 Sub-theme 2: SRL development in volitional phase

The volitional or performance phase takes place after the forethought phase and helps learners to keep up with their concentration and use appropriate learning strategies to ensure that their motivation is kept high and they keep track of their learning goals (Panadero & Alonso-Tapia, 2014). The following responses indicate participants' perspectives of how they develop SRL in their grade 8 learners, in the volitional or performance phase.

Strategy 1: Developing task strategies

Task strategies include cognitive learning strategies that comprises of different types learning strategies that learners use to make learning more meaningful and successful. Through different task strategies learners acquire more knowledge and develop SRL skills too. Most of the participants elaborated on the use of the following cognitive strategies:

> *I will ask learners to read the words and ask him or her to pronounce the words* correctly and when they fail, I will ask another learner to give or read that one. (P4S1I)
>
> *…I give an exercise and I will invite learners to work it out then I will ask again anyone with a different method if it is correct, just to encourage broader thinking. (P7S2I).*
>
> *Learners need to know the format of the paper, for example, using previous papers to learn what they expect or not. (P2S2I).*
>
> *…learners they need to brainstorm and then they answer. (P2S1I).*
>
> *I tell them how to study, mostly I tell them to study with a paper and a pen beside them so that they read first and there after transfer the knowledge they gained on the paper. (P3S2I).*

The findings revealed that some of the participants show learners there are different strategies to solve a problem. They use brainstorming, retelling, repetition, and former question papers to prepare learners for tasks and examinations. The participants did not mention more sophisticated strategies like mind mapping, imagery, elaboration or organisation of information (§2.4.5.1). A possible reason for this could be that the participants themselves only know a limited number of task strategies that they can use to develop SRL.

Strategy 2: Developing time management

Time management is a crucial strategy in SRL. To achieve academically and to develop in lifelong learners, learners should be taught how to manage their study and leisure time. They should know themselves as learners, which is their worst or best times of the day to study on their own or to do actives alone or with peers. The majority of the participants indicated that they

assist learners in how to allocate time for different activities. Most participants indicated that they assist learners to plan with a personal time-table:

> *… to advise them to have their own personal time-table to allocate time for each subject. (P2S2I, P4S1I, P3S2I, P7S2I, P3S1I and P1S1I).*
>
> *…I ask them to have a plan on the piece of a paper whereby they will indicate the time frame let me say from this time to this time what should I do (P4S1I)*
>
> *…I give ample time to learners to do their work… to make sure that they catch up with others. (P1S2I)*
>
> *…if I gave a homework learners submits after the due dates or not on time…it will not be marked (P7S1I)*
>
> *I tell them what time to study; either it is good to study in the morning, at night before they sleep or even during study session at school so most of them have study time-table that guides them.(P3S2I)*

The strategy revealed that majority of the participants help learners to develop SRL through time allocation to different subjects, management of time by being strict with due dates and advise on best times to study. These strategies are supported in literature (§2.10).

Strategy 3: Group work

According to Johnson & Johnson (2014) & Gùvenč (2010), group work involves learners divided in small groups working together to build their positive interdependence and accountability towards own learning (§2.1.5.4). Eleven participants indicated that they use group work as a strategy to develop SRL:

> *I will give group work, whereby learners work in groups, sometimes in a pair. (P3S2I, P1S1I, P1S1I, P2S2I, P4S2I, P7S1I).*
>
> *I use group work, I divide learners into groups and give them topics or questions to discuss. (P7S2I, P2S1I, P5S2I).*

Participants highlighted the advantages of using group work:

> *…they can share ideas, put their discussion on paper and then to present them. (P2S1I)*
>
> *…they read their friend's work, they edit it (P5S2I)*
>
> *…So that they can easily interact with each other, exchange the good and bad about their learning and I am quite sure that this can be a motivating factor. (P2S2I)*
>
> *…it gives them ample time to learn from their fellow learners. (P1S2I).*
>
> *I take into consideration my learners and plan first to teach the fast learners first and then and then they teach the other learners (P4S2I)*

This sub-theme revealed that most of the participants regarded group work as a strategy to developing SRL in learners. In Namibian education context, the learner-centred approach requires them to use cooperative learning as a teaching strategy.

Strategy 4: Developing self-observation of learning

Zimmerman (2000, 2002), and Puusteinen, and Pulkkinen (2001) regard self-observation as an important SRL skill. Self-observation helps learners to have a clear understanding of the adequacy and quality of what they are doing (Panadero & Alonso-Tapia, 2014). Literature revealed that self-observation can be achieved through metacognitive monitoring and self-recording.

The following are examples of how two of the participants perceive themselves to develop self-observation in learners:

> *… I always encourage them to ask questions or do more activities or check their textbook so that they can do extra activities in relation to the topic we have covered, (P2S2I).*
>
> *I encourage them to work on their own targets and reflect on them during examinations and also tests. (P1S2I).*

Most participants had difficulty to explain what they do to develop self-observation of learning. A possible reason might be that participants themselves never focus on the development of metacognitive monitoring and recording of learning behaviour, strategies, etc. in their daily teaching. Therefore it is not a SRL skill they develop in learners.

Strategy 5: Developing help-seeking

Andrade and Bunker (2010:116) state that learners can develop positive attitudes to learning through help-seeking. Depending on the difficult situations learners encounter in their learning experiences, they seek help from their fellow learners or teachers to solve the situation to help them achieve their goals (Germ & Mandl, 2010). The following are examples of how participants perceive themselves to develop help-seeking:

> *I always encourage learners not to be afraid of the teachers when they are have difficulties. I always encourage them to ask (P4S21I)*
>
> *I tell them when you choose a partner, choose the partner you are comfortable with like when it comes to asking questions, you cannot choose the person you are not comfortable with and choose the person who is knowledgeable about with the subject … brothers and sisters who completed school long time to get help from them(P3S1I)*

…we write letter to parents or guardians to help by their child to complete homework at home. (P5S1I)

Another participant explained that the infrastructure at the school and the community limit the different sources learners can go to for help:

We need things like laboratories and most of the things we do not have them here (P3S1I)

…having libraries learners should be able find time, extra time giving out themselves find information (P1S1I)

The findings from most of the participants' responses indicated that they assist their learners when they need help with academic tasks. They also encourage learners to learn for more knowledgeable peers and to ask their parents for help too. They would have told learners to utilise resources such as libraries, laboratories, etc., but it seems the rural Namibian communities lack these resources. The strategies participants used are supported by literature to develop SRL (§2.7) and (§2.4.5.2).

Strategy 6: Developing environmental structuring

The following are participant responses to what they do to structure learning environments that are conducive for the development of SRL:

… I observe learners during classes… sit and make noise and chatting or moving up and down No, they cannot. (P4S1I).

…the classroom arrangement it could be one of the factors. It just depends on how the class is arranged like in our class this time around we changed. We used to have our learners in lines and this time are in groups like our grade 8 class learners are in groups…(P2S1I)

None of the participants referred to the use of subject charts or posters, displays of learners' work or other artefacts that could be used to create an interesting inviting classroom. A few participants referred to the arrangement of desks to promote cooperative learning and the importance of discipline and class rule to help establish a conducive learning environment.

In the next section participants perspectives of how they develop SRL in the self-reflection phase will be discussed.

4.5.1.4 Theme 2: Perspectives of how SRL is developed

Sub-theme 3: SRL development in self-reflection phase

Self-reflection enables learners to judge their own performance and give reasons for their successes or failures (Panadero & Alonso-Tapia (2014). Participants' responses indicated that

they give learners opportunities for self-evaluation and reflection. They also use positive reinforcement and verbal feedback to teach learners how to make realistic attributions about their successes and failures. Some participants also explained that they reflect on their own teaching strategies in this phase and make necessary adaptation to improve learners' achievement and to develop their SRL.

The next paragraphs discuss the perspectives of participants on how they develop SRL of grade 8 learners in the self-reflection phase.

Strategy 1: Opportunities for self-evaluation

Participants indicated that they use homework, class work, projects and assignments and preparatory examinations as opportunities for learners to assess their understanding. Most of the participants perceive continuous assessment by the teacher and self-assessment by learners as the best strategy to develop learners to monitor their understanding and progress:

> *…I give tests…Practical exercises, projects and assignments. I give them a test even an exercise; from there they are able to evaluate. (P2S1I).*
>
> *…a preparatory exam whereby I assess on all the topics that I taught for that term before they sit for that exam just to test their knowledge which they are lacking and where they are fine. (P6S1I).*
>
> *Homeworks and class work… give more question and more tasks, I revise with the learners and explain difficult topics (P6S2I, P7S1I, P1S2I).*
>
> *…I give them a chance to ask questions where they did not understand and even give them a lot exercises (P2S1I).*
>
> *I do not give the corrections, I will tell them to redo that work themselves until they will get everything right. (P5S2I).*
>
> *… I tell them to do correction by themselves (P1S1I)*

Participants also explained that through assessment they become aware of the areas in which learners need assistance and then attend to those promptly. These strategies participants used are supported by Paraskeva and Alexiou (2010); Panadero & Alonso-Tapia (2014) (§2.4.5.3) and Paris and Paris (2001) who state that SRL can be enhanced indirectly when learners are exposed to repeat learning experiences at home, for example doing homework and assignments (: (§2.9).

Strategy 2: Reflection

Many participants' responses revealed that they teach grade 8 learners to reflect after assessments. They remind learners about the competencies they should achieve so that they can measure their progress against those goals or targets. They perceive reflection as a

mechanism to monitor their own progress and understanding, to plan how they can improve and attain the goals they set. This is how participants explained they develop the SRL skill of reflection:

> *Every time when we write a test I ask them to reflect… (P6S2I, P3S2I, P1S2I and P4S1I).*
>
> *After an assessment, each learner should check their results and see what they got and how they should now change. (P3S1I).*
>
> *…before you start any lesson then you recap on the previous lesson of the maybe 3 or 4 basic competencies. (P6S1I).*

The participants further revealed that it is their responsibility to keep on reminding their learners what they have achieved in the previous examination. These strategies participants use are supported by Panadero and Alonso-Tapia (2014) who state that learners respond well to efforts implemented to judge their own learning (§2.4.5.3). It is also mandatory in Namibia that each teacher ensures that learners are able to reflect on their studies through assessment feedback and correction of errors.

Strategy 3: Self-satisfaction

Participants' responses reveal that they are aware of the importance of self-satisfaction after completing a task succesfully and achieving learning goals. They use praise as positive reinforcement to make learners experience positive feelings towards learning (§2.4.5.3). The following responses encapsulate the majority of the participants' views:

> *…encouraged through giving them a certificate of for achievement they have done, they continue with that good work.…motivating these kids...(P5S2I).*
>
> *I give a gift to those who do well, it will help them to do more. (P3S2I)*

Strategy 4: Building realistic attributions for success or failure

Positive attributions about success or failure enable learners to change their strategies and effort, to develop more skills and to still achieve their goals in future. Negative attributions lead to lower achievements, low self-efficacy beliefs and feelings of hopelessness. The following response summarises how many participants explained how they develop their learners to make accurate contributions. Participants also indicated that they make learners aware not to blame others when they fail:

> *Through assessment, we help them and also when they are given progress reports they will obviously see, I did not do well and now you will tell them this is Ok, I want you to aim for this and I want you to study hard, you did this or you obtain this symbol because you did not study or worked hard toward it. (P1S2I)*

To conclude, most of the participants revealed that they develop SRL through showing learners how to make honest and realistic attributions about their successes and failures. This strategy is supported by literature because learners depend on the teachers' feedback to attribute their successes and failures (§2.4.5.3). Accurate and positive feedback about mistakes in their learning helps learners to develop high self-efficacy and motivational beliefs (§2.4.2). It also helps learners to enhance their capacities in different strategy use and problem-solving (§2.4.2).

Strategy 5: Adaption of teaching strategies

Some participants revealed that after they have done formal and informal assessments of learners' work, they often assess their own teaching strategies for effectiveness. They indicated that they sometimes change their teaching strategies and teaching aids to improve learners' progress and to help them to become self-regulated. This is what a few participants said:

> *... I normally look at my teaching material, what are the teaching aids that will make my learners know or understand my lesson? (P2S1I)*
>
> *You give the classwork, task and test at the end of every chapter (P6S1I).*
>
> *…teaching aids in the subjects, that will be very much crucial and it will help learners to know what they should target (P1S2I)*
>
> *...I do remedial teaching where you identify learners who are having difficulty not understanding the topic. After the others knock off I stay even 20 minutes with them just to go through that topic (P6S1I)*

These strategies and the commitment of the participants are supported in literature (§2.6). Teachers' behaviours that show expectations for success, respect and joy in teaching are beneficial for the development of SRL. It is evident that participants make plans to improve learners' acquisition of knowledge and understanding:

> *I will have afternoon class with some learners who cannot read to come and read (P5S2I).*
>
> *We use reading corners and encourage the reading...we used to have a mini-meeting on how to study...(P5S1I).*

In the next section the data analysis of the lesson observations will be discussed.

4.5.2 Data analysis of the lesson observations

To analyse the data from the lesson observations, lesson observation schedule was supplemented by the researcher's observation notes during class visits. The researcher developed an analysis data form to code the observations data **(Addenda F)**. Data collected through lesson observations were coded into categories of lower demonstration of SRL development and average demonstration of SRL development. The participants who were never

or rarely observed developing SRL skills in their teaching were categorised as lower demonstrations. The participants who were often or mainly observed developing SRL skills in their teaching were categorised as average demonstration of development or use of SRL skills. Although a few participants were observed developing SRL, they all lacked to develop many other important SRL skills, therefore no participant was categorised as high demonstration of SRL development. SRL was observed as an event, meaning that a participant developing SRL strategies and behaviour was ticked off in the observation schedule when it occurred. The data collected through lesson observations are presented in narrative text. The researcher could only observe one lesson of each participant because of time constraints. The results discussed below might have been different on a different day with another lesson.

Six participants with lower demonstration of developing SRL skills were identified and eight were identified with an average demonstration of developing SRL skills. Narrative descriptions of the classroom observations of the six participants with lower demonstrations of the development of SRL are presented next.

4.5.2.1 Lower demonstration of the development of SRL

The six participants who showed lower demonstrations of developing SRL in grade 8 learners are: Participants 4, 5 and 6 from school 1(P4S1O; P5S1O and P6S1O) and participants 3, 5 and 6 from school 2 (P3S2), P5S2O and P6S2O).

Participant 4 from school 1: P4S10

The participant offered a Mathematic lesson during period 4 (last period towards break-time) about consecutive integers. The participant checked on learners who did not hand in their homework. Thereafter the participant instructed learners to pick up the paper in the classroom to ensure that the learning environment is conducive. The participant instructed learners to remain standing and issued their activity books starting with the learners who had the highest scores and ending with learners who had the lowest scores. Learners with higher score kept smiling and laughing at learners with lower scores. By exposing poor performers the participant embarrassed and demotivated learners. This teaching behaviour defeats the development of SRL, because the learners performing poorly will have low self-efficacy and motivation. The participant started correcting the homework and trying to do revision of the previous lesson.

The participant used self-questioning and verbal feedback to monitor the learners' progress. The participant asked learners "if the synonym of the word *less than* is *smaller than*" what is meant by the term consecutive integers? Individual learners were instructed to read questions aloud to the whole class. A few learners were also asked to give answers. The participant reminded learners to take responsibility for their own learning by writing properly and by covering their books. The

participant let learners do individual work as well as group work. Learners who were taking notes while the teacher was presenting his lesson were stopped. Note taking is a learning or planned strategy (§2.4.5.2) used to develop SRL skill in learners. Note taking helps learners to reduce the task topic into important or meaningful parts. Yastibas and Yastibas (2015) attest that self-regulated learners initiate their own ways of learning and use of task strategies to achieve the set goals (§2.4.5.2).

The participant gave the class work on the chalkboard and asked a few learners to work out after modelling a few examples on the board. During group work, learners were given ten minutes to complete the work and report back to the class. This meant that the participant was mindful about time to spend on each activity. The participant was rarely observed developing goal setting, planning, help seeking or other SRL skills.

Participant 5 from School 1: P5S1O

The participant presented a listening lesson in English. The lesson was just after break-time. Learners ate in the classroom during break- time therefore the classroom was dirty with many papers lying on the floor. The participant did not instruct learners to pick up papers. The participant paid no attention to a clean physical environment that is conducive to learning. The participant asked learners to sit in groups of five, however no group work activity was observed.

For most part of the lesson the participant read a story about Andimba Toivo ya Toivo, a Namibian political hero, to the learners. He encouraged learners to know their heroes by reading about them, which relates to the relevance of the content to Namibian learners' lives. However, learners sat idly and listened to the story and responded to occasional questions from the participant. Learners were thanked even though their answers were wrong. Some of the learners took notes while the participant was reading, but the rest of the class were just listening to the story. Later the participant told learners to continue reading in their books, to complete an activity and to compare and evaluate each other's answers. This type of peer assessment is beneficial for the development of SRL, but unfortunately learners could not finish the activity before the end of the lesson.

The participant used questioning as a strategy to keep learners' attention, to monitor their comprehension and to give them an opportunity to participate and take responsibility for their own learning. However, no other direct or indirect development of any SRL skill on the observation list, from Zimmerman's model or literature was observed.

Participant 6 from School 1: P6S1O

The participant presented an Accounting lesson. The physical environment of the classroom was not conducive for fostering the development of SRL. The classroom was dark because the windows were covered with black and blue curtains and were not opened despite the heat. Computers in front of the class hindered learners from seeing on the chalkboard. Therefore, learners had to stand up and walk to the front or sideward to the see what the participant was writing on the board. The participant was strict and scoffed at learners who gave wrong answers. This resulted in other learners laughing at the ashamed learners who at least tried to participate. It seemed the participant's behaviour discouraged learners to participate in class. The learners sat in groups, however no group work was facilitated, and learners were given activities to complete individually. Some of the learners were discussing their own issues while the participant was teaching. The participant never intervened to draw their attention to the lesson.

The participant used the traditional transmission approach of teaching, a lot of questioning and gave time for reflection to help learners understand. He tried to activate learners' prior knowledge and gave them time to think to find the correct answers. Learners also corrected one another on the chalkboard. He tried to build learners' self-efficacy beliefs and used motivating words towards the few learners who could understand what a cashbook is, in which columns to write and how to balance a cashbook.

Participant 3 from school 2: P3S2O

The participant delivered a lesson in Life science on photosynthesis. The participant wrote the topic and the word "*fibrous*" on the chalkboard and ask three learners to pronounce the word aloud to the whole class. The word was mispronounced by all three learners. The teacher pronounced the word for the class. Learners' prior knowledge was tested by questions on photosynthesis from a previous lesson. A few learners raised their hands to answer and the majority were quiet. The teacher corrected the few wrong answers learners gave and praised and clapped hands when there were correct answers from other learners. Learners were instructed to focus their attention on the participants' explanations.

The participant drew a diagram of a plant and asked learners to label the structure of the plant, to explain the relationship between photosynthesis and transpiration and to explain how transpiration takes place. Learners used their textbooks to identify the parts individually and labelled them on the chalkboard. To monitor learners' progress and to help struggling learners, the participant moved around the class. The participant kept reminding learners of how much time to spend on each question. Besides making learners aware of time management the participant never made learners aware of the aim of the lesson or their learning goals. No direct or indirect instruction of learning strategies or other SRL skills were observed.

Participant 5 from School 2: P5S2O

Participant (P5S2O) offered a Silozi lesson. Silozi is a language in the Namibian curriculum. The participant wrote the topic on the chalkboard and started reading a poem in Silozi. Learners sat passively and listened to the participant. Similar to the other two participants described above (P5S1 and P5S2), the participant's teaching portrayed almost no demonstration of developing SRL in grade 8 learners. The participant concentrated on the content of the poem and asked a few questions to monitor learners' understanding. Learners once had to explain which roles they would have played in the poem. The participant never tried to activate learners' prior knowledge or to make the content relevant to learners' everyday life experiences. After the explanation of the poem learners were given an activity to do in their books. The bell rang while the participant was still explaining the activity.

Participant 6 from School 2: P6S2O

The participant presented a lesson in computer studies. Learners were told to write down the topic and to take notes, which was good for focusing learners' attention to the learning goals. The participant pointed out the relevance of the content by using a laptop computer to describe the role or uses of a computer both at home and in work. The participant used a laptop in class to show it to learners who had never been exposed to a computer. Many learners did not understand questions or instructions from the participant, but the participant never intervened to help learners. The participant's focus was on the content knowledge of computer studies.

In summary, in the lessons observed of these participants (P4S1O, P5S1O, P6S1O, P3S2O, P5S2O and P6S2O) the development of SRL skills in grade 8 learners was never or rarely observed. All the participants seemed to have good subject knowledge and seemed to concentrate on the content that is important for examinations. The learners of these participants were passive and the participants did most of the work for the learners. Although learner-centred teaching approaches should be followed in Namibia, the participants still cling to a teacher-centred teaching approach which relies on rote memorisation and learning without understanding.

Not one of the participants was observed developing SRL skills identified in Zimmerman's (2000) three phase model or in the literature, for example the use of different task strategies, self-evaluation, questioning, help-seeking etc. The participants never made learners aware of planning, goal setting or time management, to mention only a few SRL skills.

In general, the six participants demonstrated that they had little understanding on how they could foster the development of SRL in learners contrary to their responses in the interviews where they stated they are aware of SRL and trained to use SRL. A possible reason for participants' lower development of SRL, might be that they have relatively little teaching experience which ranged

between two and eight years. Three of the four participants are still novice teachers (under five years of teaching experience); however, one of the four participants discussed above has eight years of teaching experience. The teaching professional qualifications of the participants show that three of the participants (P5S1, P3S2 and P5S3) have undergone formal teaching training courses and the other two participants acquired their teaching qualifications part-time through open distance learning. Participants seemed to have more subject content knowledge and less pedagogical skills to develop SRL.

4.5.2.2 Average demonstrations of the development of SRL.

The eight participants who showed average demonstrations of developing SRL in grade 8 learners are Participants 1, 2 and 7 from school 1 (P1S1O, P2S1O, P7S1O) and participants 1,2, 3, 4 and 7 from school 2 (P1S2O, P2S2O, P3S2O, P4S2O and P7S2O). Narrative descriptions of the classroom observations of the eight participants where average demonstrations of the development of SRL were observed are presented next.

Participant 1 from school 1: P1S1O

The participant presented a History lesson on the War of National Resistance. This was the first lesson of the day and all learners were punctual as the teacher arrived in class. The participant ensured that the physical environment was conducive for learning and instructed learners to open the windows and arrange their groups and seating. This concurs with literature that reports that learners can achieve better if they are in a learning environment that is conducive and resembles the real life environment (§2.3.5). The participant started the lesson by asking questions based on the previous lesson to arise interest and engage learners' prior knowledge into the lesson: "W*hat is the war of National resistance? What does political autonomy mean?"* The participant wrote the topic on the chalkboard and learners took their exercise books and started writing (assumed the topic) into their note books.

The participant instructed learners to discuss the questions in groups of five, and to present their answers afterwards. Learners were given the opportunity to choose their own group presenter. During group presentation, the participant used verbal feedback to encourage them to participate in the lesson: "*That is a good statement, keep it up"*. Group members worked together and helped their presenter during the questioning time to answer other learners' questions. During the activity groups were exposed to the ideas of other learners. In literature the facilitation of group work is recommended to develop SRL (§2.9). The participant intervened when wrong answers were given by giving correct answers. It would have been more beneficial for the development of SRL if peers could have explained what the correct answers were.

Even though the above aspects were mainly or often observed, the following SRL skills were rarely observed: time management and making learners aware of goal setting. The participant paid little attention to the time groups took to make presentations. Lastly, there was no evidence that indicated the participant made learners aware of their learning goals; however learners were actively involved in the lesson. The participants' teaching behaviour was supported by his perspectives of how he develops SRL, even though the participant indicated he had never heard of the concept SRL and only knows about learner-centred teaching.

Participant 2 from school 1: P2S1O

During the second period, the participant presented a topic in Silozi about "*Maezi*" verbs. The participant wrote the topic on the chalkboard while the majority of the learners were still busy taking out books from their school bags. The participant instructed one learner to read aloud the topic from the board for the class and later asked questions to test the learners' prior knowledge. At first, the participant gave learners an activity to work out individually. The participant wrote a list of ten short sentences on the chalk board and asked learners to reconstruct the sentences. Learners were encouraged to use their Silozi language experience from home and connect it to the task.

Later learners were instructed to form five groups. During the group discussion learners were required to identify their own group secretary and presenter. The participant wrote ten words on the chalkboard and instructed learners to change the verbs into action verbs. After each group had worked together to find answers, they wrote down their answers on the chalkboard. The participant marked the learners' work on the board and gave verbal feedback to groups who got wrong answers. After marking, the learners were instructed to clap hands and also to sing this song "*thank you, very much".* The learners enjoyed the singing.

Furthermore, the learners were motivated by the participant to speak with confidence without any fear of making mistakes. The participant reminded learners about their learning goals during the lesson. Learners were further reminded to take time to think about their answers during their discussions. The participant allowed learners to take responsibility for their own learning by being actively involved and giving reasons for their answers. The participant had a few wrong answers written on the chalkboard and learners had to give reasons why the answers were incorrect. This exercise gave learners the opportunities to reflect on their prior knowledge and understanding in order to correct the answers. The lesson centred on learners' needs, involvement and development of their knowledge and skills. No discrepancies were noted between this participant's perspectives about SRL in the interviews and her teaching behaviour. The participant indicated that she was aware of the concept and her role was to assist learners to understand the new topic through allowing learners to research on topics and to gain new knowledge and skills.

Participant 7 from school 1: P7S1O

The participant presented a lesson in Physical Science about energy transfer. The participant introduced the lesson by asking learners questions: W*hat is energy and what types of energy do you know? Define the term energy transfer and give examples.* Learners were given enough time to reflect and to respond to the questions. The participant was often observed using a positive verbal feedback, and motivating and praising learners for good work. The participant seemed to have good rapport with learners and knew all their names. The participant was also often observed developing self-evaluation, reflection and monitoring of learners' understanding. Learners were instructed to evaluate their scores after the activity he had given and to reflect on why they could have done better. The participant also asked questions after the lesson.

The participant ensured that the physical environment was conducive and inviting for learning by ensuring proper ventilation in the very hot classroom. Learners' tables were grouped together. Learners were working in groups and the participant used questioning as a strategy to test the learners understanding. The participant often re-explained aspects when he noticed learners did not understand or gave vague answers. This strategy helps learners to have a clear understanding of the content. At the end of the lesson learners were given an individual activity as home work.

The participant gave learners enough time to work on activities. However, the participant never made learners aware of goal setting and other task strategies. The lesson in general was active and learners were participating. Surprisingly, this participant who demonstrated the development of SRL indirectly, indicated in the interviews that he was not aware of the term SRL and was unsure how to develop it (§2.9), (§2.10).

Participant 1 from school 2: P1S2O

The participant offered a lesson about photosynthesis in Life Science during the first period of the day. All learners arrived early for the lesson. The tidy classroom was conducive for the development of SRL as learners had cleaned the previous day and tables were arranged in groups by their teacher. Panadero and Alonso-Tapia (2014) assert that learning environment can help learners to maintain their attention and interests in tasks and to complete such tasks (§2.4.5.3). The participant pasted a poster of a plant leaf on the chalkboard. The learners were already grouped into five permanent groups in the classroom. The use of permanent groups might impede broad social interaction in the class, and also getting to know and learn from other learners in different groups. The learners' prior knowledge was prompted through questioning and by asking learners to read aloud. The participant taught self-regulated skills indirectly by explaining, thinking aloud and asking self-questions. Learners could see and hear how the

participant thinks. The participant used a plant leaf to explain how photosynthesis takes place in plants. The learners' interest was aroused as the participant constantly kept questioning learners about the topic.

The participant developed SRL task strategies by asking learners to make their own summaries from the notes given on the chalkboard. The participant further used cooperative learning. Learners had to do a group activity and presentations about plants producing their own food. Learners were given the opportunity to take responsibility for their own learning through group discussions. One group decided to write down their notes on the chalkboard first, and thereafter presented their findings. Throughout the presentations the participant wanted to evaluate, and monitor the learners' understanding of the topic. Verbal and motivational feedback in the form of praise was often observable. Mehdipour and Balaramulu (2013) reviewed that through feedback (verbal or non-verbal) a positive relationship is built between the teacher and learners (§2.3.7). The participant praised each group by saying "good presentation, good work, keep it up group 2". By doing so, learners' self-efficacy and learners' interest to learn was encouraged, which helped them to successfully complete their learning tasks (§2.2). Lastly, learners' were cautioned about their time management to discuss and complete the tasks as well the participants' expectations and the criteria for good work. This strategy is supported in the literature by Paraskeva and Alexiou (2010) and Panadero and Alonso-Tapia (2014) who state that learners should utilise time efficiently in order to know their success in the task and to learn how to manage their time to complete the task (§2.4.5.2). The participant's teaching behaviour was supported by his perspectives of how he develops SRL.

Participant 2 from school 2: P2S2O

The second period for observation was English. The participant offered a lesson on proper nouns. The participant wrote the topic "*Nouns - Proper Nouns*" and five names of places "*Bukalo, Katima Mulilo, Windhoek, Rundu and Oshakati"* on the chalkboard and instructed one learner read what was written on the chalkboard. This was aimed at making learners aware of what they will learn and to link the prior knowledge with the new knowledge (§2.9). The participant activated learners' prior knowledge by asking questions about what nouns and proper nouns are. Learners were asked to construct a sentence with proper nouns and identify the noun within the sentence. Five learners were given the opportunity to write the proper nouns on the chalkboard. By doing this, the participant was able to check the understanding of the learners. Other learners were given a chance to read their sentence aloud to the classroom. For every answer learners gave the participant thanked them and called them on their names "*Thanks! John".* It seemed learners felt proud when they were thanked, and this strategy of recognising learners' effort and progress to participate in class seemed to encourage them to try and speak English. Learners' self-efficacy was developed through the positive feedback.

The participant further used different strategies such as questioning, pair discussions, and presentation to engage learners into the lesson. The participant instructed learners to sit in pairs, to look at the chalkboard and to write down four sentences and underline the proper nouns. In pairs learners shared information, corrected each other, and hereby took responsibility for their own learning.

The participant was observed to intervene when learners failed to pronounce words correctly. The participant used a dictionary as supplementary resource to enhance learning. This is a good development of SRL, because the participant indirectly showed learners how to find help from dictionaries and other sources, especially in the Namibian context where most learners struggle with English as language of instruction. Even though this participant found it difficult to describe the teaching strategies he uses to develop SRL, his teaching behaviour in class showed that he uses many strategies to indirectly develop SRL in his learners.

Participant 3 from school 2: P3S2O

The participant offered an Entrepreneurship lesson about the means of communication in a business. The participant was mainly observed activating learners' prior knowledge by asking questions from the previous lesson to link it to the new lesson *"Who can tell me what am I holding in my hand and what is it used for?".* The participant had a laptop in her hands. Some of the learners answered that it was a machine, or a computer; only one answered that it was a laptop. When learners could not answer, the participant did not give them answers; instead waited for other learners to give more ideas. Other learners quickly used their textbooks to give answers, and this taught learners to take responsibility for their own learning by consulting their workbooks to give answers. The participant used a laptop to display pictures and to keep learners interested.

The participant made the content relevant by encouraging learners to reflect on their everyday experiences and knowledge with regard to entrepreneurship. During this lesson the teacher used group discussions, group presentations, and pair work. Learners were given pictures to identify the different technologies used to communicate (scanner, photocopier, ATM, etc.) and had to explain the use of each. Learners seemed to find the task difficult and the participant moved around groups to guide and scaffold them in their discussions. The participant monitored learners' understanding throughout the lesson with probing questions, teaching them to rethink and clarify their answers: *Do you mean this is the use of an ATM or a scanner? Why? Can you give me more uses?* Learners were immediately made aware when wrong answers were given or when words were mispronounced. The participant used repetition as a learning strategy. To develop motivation and self-efficacy, the participant encouraged learners to work very hard and to read at home.

Furthermore, the participant gave learners handouts with pictures of various types of communication entrepreneurs' use. In groups learners had to discuss which type of communication they use in their groups. The participant made learners aware of time by reminding them to spend three minutes on a topic. The participant further gave clear instructions and explanations on how to complete the activity and homework for individual practice at home: *Before writing, please ensure that you understand what to do, first cut the pictures, paste them into you workbook and then explain the use.* The participant's teaching behaviour was supported by his positive views about SRL in the interview, and how he develops SRL.

Participant 4 from school 2: P4S2O

The participant was observed during the Mathematics lesson about factorising immediately after break. Learners seemed to be active and energetic as they were moving up and down in the class before the teacher arrived. It seems a clean learning environment is important for the participant; when the participant got into the class, learners were instructed to quickly pick up papers on the floor. The literature reports that teachers must create a conducive learning environment which helps to remove all sources of distraction in learning (§2.10). Hereby the participant taught learners to have their learning environments tidy. The participant reflected on the previous lesson by giving learners corrections of their previous work to engage their prior knowledge into the lesson. The participant used the questioning techniques throughout the lesson and learners participated in answering questions*: Who is prepared to work out this sum by following the steps on the chalkboard for the whole class?*

Moreover, to encourage learners to reflect on their understanding, the participant gave learners individual class work, while learners who still struggled were instructed to do the work on the chalkboard. The participant moved around the classroom to ensure that learners were participating and engaged in the lesson, and explained to the groups that were struggling to find answers. The participant further gave notes to learners to study at home. The participant started with a teacher-centred approach where he modelled and explained to all learners the different steps in the calculations. For example *follow the sequences I gave on the chalkboard to answer this sum.* Later learners were asked to work in groups of five learners to discuss and find the answers for the activity on the chalkboard. Learners were praised for the answers given.

The participant also reminded learners of time management and made learners aware of what was expected of them by informing them that they had just five minutes to complete the task. The participant ensured that learners were aware of their goals and the objectives of the lesson and reminded them time and again of what they had to be able to do after the lesson. This participant's perspectives about SRL and how he develops it through his teaching reflected in his teaching behaviour in class.

Participant 5 from school 2: P5S2O

The participant offered a lesson in Accounting about balancing a cash book, during the last period. Learners seemed to be bored and tired from the previous lessons, but the participant was energetic and succeeded in engaging the learners. The participant was often observed developing SRL skills. The participant started the lesson by asking learners questions on what aspects the balance contains to link learners' prior knowledge with the new lesson. The participant also gave the opportunity to learners to ask questions. Cooperative learning was applied in the classroom as learners were instructed to discuss and complete the activities in groups of five and presented their answers to the class.

The participant motivated and built learners' self-efficacy by calling learners on their names, praising them for good work and commenting on the knowledge they demonstrated in the lesson. Learners took responsibility for their own learning by participating freely, taking notes on their own, and by their involvement in the group presentations. The lesson was active and learners' interest and motivation to learn could be observed. This participant's perspectives about SRL and how he develops it through his teaching corresponds with his teaching behaviour in class.

In summary, the eight participants described above, demonstrated average development of SRL skills in comparison to the six participants who demonstrated lower development of SRL skills. The clean, neat, and tidy physical environment of the classrooms observed created a conducive learning for participants to foster SRL skills in grade 8 learners. Participants used cooperative learning (group work) for learners to interact and enhance self-motivation and efficacy. Participants triggered the prior knowledge of learners and use prompt intervention when learners did not understand what was taught. The participants were further observed to use questioning, group and pair discussion which gave learners freedom to make decision and take responsibility of own learning.

Generally, the eight participants observed with an average demonstration revealed some understanding of how they could foster the development of SRL to grade 8 learners. The majority of the participants were experienced participants with teaching experience between eight years to twelve years; only two of those participants were novice teachers with two years teaching experience. Furthermore, most of the participants were teaching core-curricular subjects. Their educational qualifications reflect that the majority have undergone the formal teaching training course and were trained on the pedagogics and subject content, but not necessarily on how to develop SRL in learners.

However, participants made few efforts in developing goal setting, strategic planning, self-evaluation, and causal attribution.

The table below summarises the findings by comparing the participants with lower and those with average demonstration of development SRL (**See Addendum F**).

Table 4.2: Summary between lower and average demonstration of SRL

Lower demonstration for development of SRL	Average demonstration for development of SRL
• *Uses more of direct and less indirect skills*	• Uses more indirect than direct skills
• *Uses individual learning method*	• Uses cooperative or group work
• *The participant asks most of the questions*	• Learners discuss and ask participant questions
• *Uses negative verbal feedback*	• Uses positive feedback to encourage motivation and self-efficacy
• *Does not encourage learners to self-evaluate and reflect on their own learning*	• Encourages learners to self-evaluate and reflect on their own learning
• *Uses few learning strategies, mainly writing notes on the chalkboard*	• Uses more learning strategies such as notes, reading aloud, discussion and etc.
• *Little opportunity for learners take responsibility for their learning*	• Develops the opportunity for learners take responsibility for their learning
• *More teacher-centred; uses individual activities*	• More learner-centred; uses cooperative learning
• *Does little to motivate learners and develop self-efficacy*	• Learners are motivated and self-efficacy of each learner is developed
• *Uses limited questioning technique to monitor the learners' progress*	• Uses more questioning technique to monitor the learner's progress
• *Gives little or no attention to the physical environment to ensure conducive classroom for learning.*	• Uses the physical environment to ensure a conducive classroom for learning.
• *Does little to intervene when learners do not understand*	• Intervenes when learners do not understand
• *Little is done to engage learners in their prior knowledge and integrate with new content*	• Uses the prior knowledge to link the learners with the new content
• *Teacher gives little or no attention to time management and goal setting*	• Pays more attention to time management and goal setting

In conclusion, participants used both direct and indirect instructions to develop the SRL of grade 8 learners even though most of the participants used the direct approach. Paris and Paris (2001) assert that SRL can be enhanced through direct and indirect practice by increasing awareness in learners about their motivational goals and standards. Zimmerman (2000) adds that direct instruction can be achieved through the integration of SRL (§2.9). The participants used a variety of strategies such as planning, monitoring, and understanding to ensure that SRL is developed within learners

4.6 SUMMARY

In summary: the participants' positive perspectives about the concept SRL and their awareness of SRL were evident in the strategies they use to develop SRL in grade 8 learners. Most of the participants could connect SRL to the Namibian learner centred curriculum. The majority of participants were also aware of their roles in developing SRL. A few participants mentioned how the Namibian learners' social and physical environment hinders teachers to develop SRL. The participants listed the following contributing factors: educational level, economic status, poverty and location of the school, as well as the classroom situation. All the participants value SRL to develop learners by learning how to learn and to enhance their academic success. Discrepancies were noted in some participants' perspectives of SRL and their teaching behaviour to develop SRL. The analysis of observations revealed the following: In the forethought phase many participants do not develop learners' goal setting, strategic planning, task interest, outcome expectations and learning goal orientations. In the volitional phase, time management, assessment of progress and understanding, help seeking from others, self-reflection and environmental structuring were developed by a few participants only. The development of the following SRL strategies were never observed: self-observation, metacognitive skills, self-consequences, imagery and task incentives. Many participants indicated in the interviews that they develop learners' SRL skills in the self-reflection phase, to use self-reflection, self-evaluation and to make realistic attributions about their success and failures. However, only a few participants taught learners to use self-reflection and self-evaluation to improve their learning.

In the next chapter the research questions are answered and the conclusion and recommendations are made from the data analysis.

CHAPTER 5: SUMMARY, FINDINGS AND RECOMMENDATIONS

5.1 INTRODUCTION

The previous chapter (four) gave the content analysis of the research. The themes and sub-themes created were discussed. This chapter outlines the summary of the research (§5.2), the findings (§5.3) in line with three research questions which will give answers to the primary research question namely how do teachers develop SRL of grade 8 learners two rural school in Namibia. In (§5.4) recommendations are made to help teachers to develop SRL of learners (§5.5), in (§5.6) the chapter concludes with the limitations of the study.

The next section gives a summary of the research.

5.2 SUMMARY OF THE RESEARCH

The key purpose of this section is to provide an overview of this research study by focusing on the significant features of each chapter. The next paragraphs summarises what was discussed in each chapter.

Chapter one introduced an outline of the research study which investigated the perspectives of Namibian teachers' development of grade 8 learners' self-regulated learning. Firstly, this chapter (1) used the introduction and background (§1.1) to create an awareness of the study. The discussion of the problem statement and motivation (§1.2) gave the framework of this study. The preliminary literature review (§1.3) clarified the relevant keywords (§1.4) used in this research study. Discussions of research questions (§1.5), aims and objectives (§1.6) of the research study were outlined. A deeper theoretical perspective of research was described (§1.7) together with description of the research design (§1.8.1). A description was given of the sampling methodology (§1.8.2) used and the different types of sampling methods (§1.8.2) were identified. The method of data collection (§1.9), data analysis (§1.10), trustworthiness (§1.11) along with the ethical consideration (§1.12) were presented. Lastly, the contribution to the study (§1.13), and the summary (§1.14) and the chapters' outline (§1.15) were discussed.

Chapter two dealt with a literature review to find out the perspectives of Namibian teachers' development of grade 8 learners' self-regulated learning (SRL). The first part of chapter defined the term SRL (§2.2); different theoretical perspectives of SRL (§2.3) were clarified which included the Behaviourists' theory or operant theory of SRL (§2.3.1), Phenomenological theory SRL (§2.3.2), information processing theoretical perspective (§2.3.4), cognitive construct perspective and social cognitive theoretical perspective of SRL. The models of SRL in social cognitive theory (§2.4) were explained in detail by the the following models: Boekaert's model of adaptable learning (§2.4.1), Borkowski's process-oriented model of metacognition (§2.4.2), Pintrich's

general frame work for SRL (§2.4.3), Winne's four stages model of SRL (§2.4.4) and Zimmerman's social cognitive model of SRL (§2.4.5).

The literature provided an in-depth discussion on Zimmerman's social cognitive model of SRL as theoretical frame work of the study. The chapter highlighted the importance of teachers' support in the development of SRL (§2.5) and the roles of teachers in development of SRL (§2.6). Through the literature the strategies teachers use to develop and enhance SRL (§2.7) were explored, together with how SRL influences the academic performance of learners (§2.8). Lastly short summary of the chapter was presented by the research.

Chapter three addressed the research approach, research design and methodology that were used in the research study. The purpose of the empirical research (§3.2) and the research questions (§3.2.1) were presented. The research approach and methodology (§3.3), research paradigm (§3.4), qualitative research (§3.5) and the case study as the research design (§3.6) were discussed. Furthermore, the population and sampling (§3.7) which included the population (§3.7.1), sampling (§3.7.2), bibliographical data of the participants (§3.7.3) and research sites (§3.7.4) were discussed in this chapter. The data collection procedures (§3.8) which included observations of each participant teaching a grade 8 lesson and semi-structured interviews were discussed. The data analysis (§3.9) was grounded on the themes and sub-themes of Zimmerman's three phase model. The trustworthiness (§3.10) and the ethical considerations (§3.11) of this research were adhered to. Lastly, the contribution of the study (§3.12) and summary (§3.13) were presented.

In Chapter four data were analysed and interpreted. The aims and research questions of the empirical study (§4.2), the research population and sampling (§4.3) as well as the process of data analysis (§4.4) were presented. The discussion and analysis of the data from semi-structured interviews (§4.5) was presented under themes and sub-themes. The themes and sub-themes generated from semi-structured interviews (§4.5.1) were discussed first, and secondly the data from the observations were discussed in narratives (§4.5.2). The data from the observations were categorised into lower (§4.5.2.1) and average (§4.5.2.2) demonstrations of development of SRL in grade 8 learners. Lastly, a short summary (§4.6) of the data analysis and discussion was given.

Chapter five outlines the research findings, recommendations and limitations of this research study.

5.3 FINDINGS OF THE RESEARCH

The findings discussed below are prepared on the basis of the literature review as well as the analysis of the data collected. The primary research question of this study is shown below:

- *How do teachers develop SRL of grade 8 learners? (§1.5).*

In order to answer the primary question, the main research question was broken down into three sub-research questions (§1.5).

The sub-questions will be answered next.

5.3.1 Findings with regard to the first sub-question (§ 1.5)

- *What are teachers' perspectives about the concept SRL and its value for academic success?*

The first sub-question is answered from the literature of Chapter 1 and 2 and the responses of participants in the semi-structured interviews interviews (§ 4.4.1).

The concept perspective is viewed as a particular way of considering and thinking about something (Oxford, 2010). Oolbekkink-Marchand, Van Driel and Verlop (2006) describe perspectives as specific meanings attached to phenomena (SRL) which then mediate our response to situation involving those phenomena. In this study perceptions are defined as the views, opinion, conceptions, beliefs, interpretations, actions, and intentions on how to develop SRL (§1.4.8). Teachers' perceptions of teaching and learning are formed from their knowledge and beliefs about how to teach and how to learn. These perceptions lie on a continuum from teacher-centred or transmission approaches to learner-centred social constructivist teaching approaches (Dignath-van Ewijk & Van der Werf, 2012; Lombaerts et al. 2009) (§ 1.4).

The participants' persceptions below cover understanding of the concept SR and the value of SRL for academic success.

All participants attested to the value of SRL to enhance learners' academic achievement and to prepare them for life after school. Participants' perspectives indicated SRL helps learners to develop, to take responsibility for their own learning, to have confidence in their abilities, to commit to lifelong learning and to become knowledgeable (Zimmerman, (2000, 2013); Moseki & Schulze (2013) (§ 4.5.1.1).

Although SRL is perceived as important for academic success, a few participants also viewed the development of SRL as a time-consuming, difficult process worsened by difficult learners who are dependent on teachers (§ 4.5.1.1).

Most participants perceived their roles in the development of SRL as facilitators, guides, mentors, and supervisors who use encouraging words and who monitor learners' progress. A few participants highlighted teachers' roles to teach content to develop learners' knowledge and skills

and to prepare them for future careers. Participant responses also revealed that they perceive themselves to be practising learner-centred teaching which develops SRL.

Participants' perspectives indicate that they belief the socio-economic and educational situations of grade 8 Namibian learners affect their abilities and willingness to become self-regulated learners (Schunk, 2014). The participants revealed that both the social and physical environments as well as the poor educational system in rural areas in Namibia, are not conducive for the development of these learners' SRL. The inhibiting factors in the development of SRL, that were mentioned, included their home situations, negative peer influences, poor parental support, demotivated teachers, unfavourable classrooms and the rural location of the schools (§ 4.5.1.1).

As indicated by literature, the perspectives of SRL that the participants hold, could be the result of various influences, such as the learner- centred teaching approach that is advocated in the Namibian curriculum; exposure to the development of SRL during professional development courses; workshops and national curriculum policy statements that emphasise learner-centred, social constructivist, methodological teaching approaches which are beneficial for the development of SRL.

5.3.2 Findings with regard to sub-research question two (§ 1.5)

- *Are teachers aware of SRL and were they trained to use and implement self-regulated learning strategies?*

Teachers are required to know what SRL and what it entails in order to develop and support their learners to become self-regulated Zimmerman (2000), (§1.4.1). Therefore, the researcher decided to first explore participants' awareness and prior training to develop SRL. In this study the majority, eleven participants, indicated that they are aware of and familiar with the concept SRL. These participants related SRL to learner-centred teaching approaches and strategic learning. They said the concept is reflected in circulars from MEAC, the Regional directorate of Education of their region and the learner-centred approach that is followed in the Namibian curriculum. The findings also revealed that participants use other concepts such as learner-centred education interchangeably with the concept SRL (§4.5.1.1). Only three participants indicated they had never heard of SRL.

Although the majority of the participants said they are aware of SRL, not all of them have received training to develop SRL in learners. Nine participants indicated they do have practical and theoretical knowledge to develop SRL which they gained through their initial teacher training in colleges and universities, workshops, departmental circulars and professional development courses. Five participants indicated that they have never received any training to develop SRL.

5.3.3 Findings with regard to sub-research question three (§ 1.5)

- *Which self-regulated learning strategies do teachers use while teaching different grade 8 subjects?*

To answer this research question, data from the semi-structured interviews and observations were analysed and interpreted. Notwithstanding their perspectives regarding the value of SRL, discrepancies were noted in what some participants said in their interviews about (i) their roles in the development of SRL, (ii) their perspectives of how they develop SRL in grade 8 learners, and (iii) the development of SRL skills observed in the lessons. These discrepancies will be pointed out in the discussion that follows.

5.3.3.1 SRL skills developed in the forethought phase

According to participants' perspectives revealed in the semi-structured interviews they develop the following SRL skills in grade 8 learners in the forethought phase: strategic planning, goal setting, motivational beliefs, self-efficacy beliefs, task interest, outcome expectations and learning goal orientations.

Although participants indicated that they use the prescribed target forms in the Namibian curriculum to develop learners' goal setting, no participant referred to the target forms or other learning goals in the observations. Only a few participants wrote the topics of the lessons on the board, which could have helped learners to be aware of the content that would be discussed in the lesson. Only a few participants explained to learners which competencies they were expected to achieve at the end of the lessons.

Lesson observations revealed that most participants use strategies like praise, positive reinforcement and positive feedback to build grade 8 learners' motivation to learn, their self-efficacy beliefs to a great extent and outcome expectations to a lesser extent for academic success. With the exception of the four participants who were categorised under lower demonstration of SRL development, most participants made some effort to create task interest by using their subject knowledge to teach relevant content, instruction aids and relating content to learners' everyday lives. However data from the observations indicated, in contrast to participant perspectives, that strategic planning, goal setting and the development of learning goal orientations were rarely observed in the fourteen lessons. A few participants indicated that to develop learners' strategic planning skills, they make criteria for assessment clear and teach learners how to use time tables to prepare for examinations and tests.

These participants associate and equate strategic planning only with planning for study time for examinations. No participant indicated how they develop learners to plan for resource strategies,

favourable learning environments, or learning strategies to complete their academic tasks. With the development of the SRL skill, strategic planning, learners should also be taught, besides time management, how to plan for task strategies like with whom, when, and where they will study as well as the resources they will need.

It seems participants' perspectives of how they develop SRL skills such as strategic planning, goal setting and learning goal orientations differ from the observations of the SRL skills they develop in class and the strategies given in literature to develop SRL.

5.3.3.2 SRL skills developed in the volitional/performance phase

In the semi-structured interviews participants indicated they develop the following SRL skills in the volitional or performance phase: task strategies, group work, time management, self-assessment of progress and understanding, self-observation of learning, help-seeking and environmental structuring. However, self-assessment of progress and understanding was the only SRL skill observed in the lessons of a few participants in lesson observations.

5.3.3.3 SRL skills developed in the self-reflection phase

In the interviews participants indicated they develop the following SRL skills in the self-reflection phase: opportunities for self-evaluation, reflection, self-satisfaction and building realistic attributions for success or failure, adaption of teaching strategies. The adoption of teaching strategies is not a sub-process in Zimmerman and Moylan's (2009) SRL model, but was included as a sub-theme, because the researcher believes it is an important strategy participants use after they have evaluated their own teaching strategies to improve their teaching and to enhance learning.

The findings indicate that not all the sub-processes in Zimmerman and Moylan's (2009) adapted model were mentioned as SRL skills by participants. For example none of the participant responses indicated the development of the following SRL skills in the volitional phase: self-instruction, imagery, interest incentives, self-consequences, metacognitive monitoring and self-recording. Most participants monitored the learners' understanding and progress by individual questioning. The metacognitive skills of self-questioning, planning and regulating were rarely observed. In the self-reflection phase none of the participant responses indicated the development of adaptive behaviour and teaching learners not to demonstrate defensive behaviours. None of the previously mentioned SRL skills were observed in the lesson observations.

In summary, the findings of the lesson observations indicate that most participants use strategies to varying extents to develop the following SRL skills of grade 8 learners, namely their strategic

planning, goal setting, motivation, self-efficacy beliefs, task interest, time management skills, self-assessment skills and skills to work cooperatively with others in a group. The development of these SRL skills in learners are supported in literature (§ 2.4.5.1), (§ 2.4.5.2), (§2.4.5.3) and (§ 2.10).However, many participants only seat learners in groups and no specific group work activity is planned. It seems that some participants equate seating learners in groups with a social constructivist learner-centred teaching approach, assuming learners will naturally share ideas, learn and benefit from the social interaction. In one class a participant placed learners in a "permanent" group.

Participants were relatively young teachers with the highest teaching experience 12 years. One would have expected seeing that most of them are trained in learner-centred constructivist approaches, which complements SRL development, but it seems many participants are still like the traditional behaviouristic teachers who believed subject knowledge is the main yard stick for competence.

It can be concluded that although most participants had an understanding, awareness and theoretical knowledge of SRL they lacked the skills to apply their SRL knowledge and beliefs in the teaching practice. Most participants demonstrated an average development of SRL skills when teaching grade 8 learners. In general most participants varied in their perspectives of how they develop SRL and how they develop SRL practically when teaching.

There was a substantial difference in the prevalence as well as the quality of participants' teaching behaviour to develop learners' SRL. These findings concur with the findings of De Zoysa et al. (2014) and Dzulkifli and Alias (2012).

Table 5.1 below summarises the SRL skills participants develop according to their perspectives and the SRL skills the researcher observed during the fourteen lesson observations.

Table 5.1: Summary of SRL skills named in interviews and observed in lessons

	Teaching SRL skills mentioned in the interviews	Development of SRL skills observed in the lessons
Sub-themes: SRL development in the forethought phase	Developing strategic planning	Rarely observed
	Developing goal setting	Rarely observed
	Developing motivational beliefs	Most often observed
	Developing self-efficacy beliefs	Most often observed
	Developing task interest	Frequently observed
	Developing outcome expectations	Rarely observed
	Developing goal orientation	Rarely observed
Sub-themes: SRL development in the Volitional phase	Developing task strategies	Rarely observed
	Group work	Most often observed
	Developing time management	Rarely observed
	Developing self-assessment of progress and understanding	Frequently observed
	Developing self-observation of learning	Not observed
	Developing help-seeking	Rarely observed
	Developing environmental structuring	Rarely observed
Sub-themes: SRL development in the self-reflection phase	Opportunities for self-evaluation	Frequently observed
	Reflection	Rarely
	Self-satisfaction	Frequently observed
	Building realistic attributions for success or failure	Rarely observed
	Adoption of teaching strategies	Rarely observed

5.4 RECOMMENDATIONS

On the basis of the research and the broad Namibian educational landscape a number of recommendations are made to improve the development of SRL skills to improve learners' academic achievements across all grades.

The following proposed recommendations toward this study are divided into four sections.

5.4.1 Ministry of Education

From the results of the study, the researcher recommends that the Ministry of education do the following:

Ensure that all schools, especially rural schools, have the infrastructure such as functional classrooms, libraries, laboratories, computer laboratories, etc. that teachers need to develop SRL.

All Namibian schools should develop a collective approach to the development of SRL across all grades.

Ensure that novice teachers get extra support from experienced mentor teachers in teaching skills to develop SRL.

Workshops that focus on practical teaching skills to develop SRL across different grades and subjects should be conducted.

Teachers should be trained in their roles as facilitators as well as on how to plan and use group work effectively in teaching.

Collaboration with subject specialists and academics from universities to have intervention programmes in schools to develop and train teachers in strategies to develop SRL skills in different subjects is required.

5.4.2 Regional Educational directorate

Based on the outcomes of this research, the researcher recommends the following to the Regional Directorate:

The directorate must ensure an even distribution of resources to rural schools such as furniture (chairs and tables for learners), libraries and laboratories which can assist teachers in developing SRL skills.

Organise and conduct regional workshops to ensure that teachers are aware of the teaching strategies to develop SRL in learners.

Teachers should be trained to use cooperative learning as a teaching strategy to develop SRL.

Invite regional or national experts from the local universities to equip or train teachers on how they can develop SRL skills and incorporate them with learner-centred teaching approaches.

5.4.3 School management team

The following recommendations result from the findings of this research for the School Management Team:

The School Management Team should promote the development of SRL through the entire school.

The School Management Team must ensure that the school environment is conducive for effective teaching and learning where SRL can be developed and enhanced.

The School Management Team should conduct continuous professional programmes at school level whereby teachers share expertise and experiences of how they develop SRL.

5.4.4 Teachers

The following recommendations are made for teachers based on the results of this research:

Teachers must ensure that the learning environments of their classrooms are conducive for self-regulated learning. This means that classrooms should be clean, properly ventilated and well organised.

Teachers should model SRL strategies and also make learners aware of SRL strategies by explicitly teaching task strategies, help-seeking strategies, time management, planning and goal setting.

Teachers must use different types of oral and written feedback to develop SRL in their learners.

Teachers must use different approaches and activities to engage all learners during the lessons.

5.5 Further study

To conclude, it is recommended that the same research be repeated in more and in different schools across different grades in Namibian schools to explore how teachers develop SRL in learners, or whether they do not. Misperceptions of the implementation of a learner-centred teaching approach and other challenges Namibian teachers might experience could be identified, such as the planning and facilitation of group work

Further research should focus on possible strategies on how to overcome the mentioned challenges from this study in the same region. Finally, further studies should be carried out to explore how Namibian teachers in rural areas can receive more departmental and regional educational support to develop their capacities for SRL development in learners. The discrepancies between teachers' perspectives of their knowledge of SRL, its value for academic achievement and their teaching behaviour require further exploration.

5.6 LIMITATIONS OF THE STUDY

The purpose of the study was to explore Namibian teachers' perspectives of how they develop grade 8 learners' SRL.

- This study was confined to two schools in the Zambezi region located in north-eastern part of Namibia and cannot be generalised to all Namibian schools. The sample in the study was also small due to the study timeline and the research design

- The research was conducted by a novice researcher who needs more practice in qualitative data collection methods.

- Only one lesson from each participant was observed. The developing of different SRL skills might have been demonstrated more frequently if more lessons had been observed.

5.7 CONCLUSION OF THE STUDY

This study focused on grade 8 teachers' perspectives of how they develop learners' SRL in two secondary schools in the Zambezi region in Namibia. Three sub aims were used in the investigation; one aim was to find out what teachers' perspectives are about the concept SRL and its value for academic success. The other two aims were to explore whether teachers are aware of SRL and whether they were trained to use and implement self-regulated learning strategies, and lastly to explore which self-regulated learning strategies teachers use while teaching different grade 8 subjects.

Findings revealed discrepancies in some participants' perspectives of how they develop SRL and the actual teaching strategies they demonstrated in their lessons. In line with literature, it can be concluded that the participants who had more knowledge about SRL, and who understood their roles in the development of SRL, demonstrated more observable teaching behaviour that develops SRL (Dignath-van Ewijk et al., 2012).

This study indicated a serious need for interventions to make practising teachers aware of strategies to develop different SRL skills. Workshops to train teachers for the development of SRL should be convened, and literature about various strategies to develop SRL should be circularised to schools. The results on teachers' perspectives and teaching behaviour allow the assumption that the perspectives and teaching behaviour of many other secondary school teachers might be even more limited and less promising for the development of SRL.

5.8 SUMMARY

This chapter provided the discussion of the findings within the framework of the research questions. The key findings of this study were that six participants exhibited lower development of SRL skills in grade 8 learners. More than half of the participants' teaching behaviour demonstrated average development of SRL skills. In none of the lessons observed, high demonstrations of teaching behaviour that develops SRL was observed. Participants also

perceive the infrastructure in rural schools, teachers' commitment and learners' poor social and economic situations as factors that inhibit the development of SRL in the two rural schools. Recommendations for improvement in the development of SRL in schools were made and further studies were proposed. Limitations of the study were provided.

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ADDENDUM A OBSERVATION SCHEDULE

Observation Schedule

Researchers' Name: Mr HS Sikwanga

Student No. 20479131

Ethics No. NWU-00184-16-A2

Supervisors' Name: Dr. BW Geduld and Dr E Lubbe

Research Topic: *perspectives of Namibian teachers' development of grade 8 learners' self-regulated learning.*

Observation Instrument for development of self-regulated strategies in grade 8 learners

Participant number_____

School _____

Class _____

Subject_____

Date_____

Time of observation _____

1. The participant teaches self-regulated skills directly to learners.
   Never observable ☐ Rarely observable ☐
   Often observable ☐ Mainly observable ☐

   ---

2. The participant teaches self-regulated skills indirectly to learners.
   Never observable ☐ Rarely observable ☐
   Often observable ☐ Mainly observable ☐

   ---

3. The participant teach learners strategies like self-questioning, planning, monitoring of understanding.
   Never observable ☐ Rarely observable
   Often observable ☐ Mainly observable ☐

   ---

4. The participant uses verbal feedback to develop self-regulated skills.
   Never observable ☐ Rarely observable ☐
   Often observable ☐ Mainly observable ☐

   ---

5. The participant encourages self-evaluation and reflection to develop self-regulated skills.
   Never observable ☐ Rarely observable ☐
   Often observable ☐ Mainly observable ☐

   ---

6. The participant shows learners how to use different learning strategies/ or model the use of different learning strategies.
   Never observable ☐ Rarely observable
   Often observable ☐ Mainly observable ☐

---

7. The participant gives learners the opportunity to take responsibility for their own learning.
   Never observable ☐ Rarely observable ☐
   Often observable ☐ Mainly observable ☐

---

8. The participant uses forms of cooperative learning to develop self-regulated learning skills.
   Never observable ☐ Rarely observable ☐
   Often observable ☐ Mainly observable ☐

-

9. The participant develops motivation and self-efficacy.
   Never observable ☐ Rarely observable ☐
   Often observable ☐ Mainly observable ☐

---

10. The participant uses questioning as a technique to encourage monitoring of progress.
    Never observable ☐ Rarely observable ☐
    Often observable ☐ Mainly observable ☐

---

11. The participant ensures that the physical environment of the class is conducive for the development of self-regulated learning.
    Never observable ☐ Rarely observable ☐
    Often observable ☐ Mainly observable ☐

---

12. The participant intervenes when learners do not understand.
    Never observable ☐ Rarely observable ☐
    Often observable ☐ Mainly observable ☐

---

13. The participant prompts the learners to activate prior knowledge and to integrate new knowledge.
    Never observable ☐ Rarely observable ☐
    Often observable ☐ Mainly observable ☐

---

14. The participant allows the learners to take responsibility for structuring their learning by giving them some freedom of decision-making.

Never observable ☐ Rarely observable ☐

Often observable ☐ Mainly observable ☐

---

15. The participant makes learners aware of time management.

Never observable ☐ Rarely observable ☐

Often observable ☐ Mainly observable ☐

---

16. The participant makes learners aware of goal setting.

Never observable ☐ Rarely observable ☐

Often observable ☐ Mainly observable ☐

ADDENDUM B INTERVIEW SCHEDULE

Introduction

Good afternoon Sir/Madam, I am Mr Sikwanga Humphrey, a student at North West University, studying for a masters degree in curriculum studies. My student number: 20479131, Ethics No: NWU-00184-16-S2. My research topic: *Perspectives of Namibian teachers' development of grade 8 learners' self-regulated learning.* I am conducting interviews on the above topic which covers self-regulated learning. Would you please help me by answering the following questions?

Questions	**Aim of question**
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. Have you ever heard of the concept? What does this concept 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.*** 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.
Were you ever made aware of teachers' roles in the development of self-regulated learning in your initial teacher training and/or in the current workshops offered by the Department of Education?	To determine whether teachers are trained to use and implement self-regulated learning strategies?
Were you ever trained or have your ever received information on how to develop self-regulated learning in learners?	To determine whether teachers are trained to use and implement self-regulated learning strategies
Is self-regulated learning in any way reflected in your current teacher education programme? If it is reflected, in what way, and if not, why not?	To determine what are teachers' perceptions of the concept self-regulated learning
Which typical elements would you associate with the development of self-regulated learning in your teaching?	To determine teachers' perceptions about the concept self-regulated learning and its value for academic success

Do you think teachers have a role to play in the development of learners' self-regulated learning?	To determine teachers' perceptions about the concept self-regulated learning and its value for academic success
What do you think motivates learners to be self-regulated?	To determine teachers' perceptions about the concept self-regulated learning and its value for academic success
How do you think does the social and physical environment influence self- regulated learning of your learners?	To determine teachers' perceptions about the concept self-regulated learning and its value for academic success
What do you perceive as a desirable situation for developing self-regulated competencies in your learners?	To determine teachers' perceptions about the concept self-regulated learning and its value for academic success
Which self-regulated learning strategies do you use when teaching your grade 8 subject? **The following follow up questions will be asked if participants have trouble to report on the strategies they use.**	To determine which self-regulated learning strategies do teachers use while teaching different grade 8 subjects.
Please explain what you do to help your learners cope when they have to prepare for assignments and examinations.	To determine which self-regulated learning strategies teachers use while teaching different grade 8 subjects.
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 grade 8 subjects.
Do you believe Grade 8 learners can take responsibility for their own learning?	To determine which self-regulated learning strategies teachers use while teaching different grade 8 subjects.
Please explain what you do to help your learners make their own decisions on where, when, how and with whom to study.	To determine which self-regulated learning strategies teachers use while teaching different grade 8 subjects.
Which processes do your learners use to achieve academic goals?	To determine which self-regulated learning strategies teachers use while teaching different grade 8 subjects.

We have just elaborated on the meaning of the concept of self-regulated learning. Please describe the activities you think are needed to implement self-regulated learning in the subjects in which you are involved.	Determine the implementation of SRL in the classroom.
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:** **How do you teach your learners to:** **plan,** **set goals,** **use different strategies,** **reflect on their work,** **evaluate their understanding and progress?**	To determine which self-regulated learning strategies teachers use while teaching different grade 8 subjects.
How does your planning to develop learners' self-regulated learning help you to develop your own self-directedness as a teacher?	To determine how teachers' awareness of self-regulated learning influence the development of their own self-directedness.

ADDENDUM C INTERVIEW TRANSCRIPTIONS

Participant 1 School 1 **Interview questions**	
Interviewer	Good morning madam and how are you?
Teacher	*Good morning and how are you?*
Interviewer	I am fine.
Interviewer	I am Mr Sikwanga a student of North-West University conducting interviews today for a Masters' degree in curriculum studies covering the concept of Self-regulated learning and my researcher topic is *perspectives of Namibian teacher' development of grade 8 learners' self-regulated learning.* Would you please assist me by answering the following interview question
Teacher	*Yes*
Interviewer	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. Have you ever heard of the concept?
Teacher	*Self- regulating learning but of not familiar to self- regulating, I have heard about this concept but I am more familiar with learner centred education. So I am relating learner-centred to self-regulated learning.*
Interviewer	What does this concept mean to you?
Teacher	*Self- regulating to me it means this is the way of giving learner an opportunity to express what they know for example you as a teacher your role is more of facilitating them, guiding them, everything is from learners, themselves.*
Interviewer	Did you ever come across learners with these characteristics in your teaching career?
Teacher	*Yes for example when I give a group for discussions, some learners are able to come up with ideas, they design this topic in a sense very well.*
Interviewer	How would you describe these learners?
Teacher	*How will I describe the learners, I will describe them as one, the learning itself is centred to them.*
Interviewer	Were you ever made aware of teachers' roles in the development of self-regulated learning in your initial teacher training and/or in the current workshops offered by the Department of Education?
Teacher	*So far since I am a new teacher, I have never attended the workshop, I just know the learner-centred the role of teachers is facilitator, so I apply is just the facilitator goes to help them, assist them.*
Interviewer	Were you ever trained or have your ever received information on how to develop self-regulated learning in learners?
Teacher	*Hmm, I have never*

Interviewer	Is self-regulated learning in any way reflected in your current teacher education programme?
Teacher	*Yes*
Interviewer	If it is reflected, in what way, and if not, why not?
Teacher	*How it is reflected like through learner-centred since the ministry, emphasising the issue of learner-centred education itself.*
Interviewer	Which typical elements would you associate with the development of self-regulated learning in your teaching?
Teacher	*Ok, the most important thing developing self-regulated learning as far as I have seen is like it helps learners to come to the centre of learning itself unlike teacher centred whereby most of things, come from the teacher but you see when you conduct self-regulated learning in class learners themselves will be able to come up with ideas counter of some of the topics.*
Interviewer	Do you think teachers have a role to play in the development of learners' self-regulated learning?
Teacher	*Yes, they have a role to play not much but we want everything to come from learners, like you as a teacher you just facilitate to guide because even if you give them a task you will see that they even need your attention itself.*
Interviewer	What do you think motivates learners to be self-regulated?
Teacher	*A lot of things , it is*
Interviewer	How do you think does the social and physical environment influence self- regulated learning of your learners?
Teacher	*Social and physical* *How I think is more of influence self-regulated learning in learners , I think negatively* *Lack of resources for example if they go home if that learner is eager of learning himself maybe the parent are not after this learner are you having a homework.*
Interviewer	What do you perceive as a desirable situation for developing self-regulated competencies in your learners?
Teacher	*The one I think desirable having resources e.g. having libraries learners should be able find time, extra time giving out themselves find information unlike here you see that they are given homework they struggle.*
Interviewer	Which self-regulated learning strategies do you use when teaching your grade 8 subject?
Teacher	*Group discussion whereby I group learners into groups not big about 4 to 5.*
Interviewer	Please explain what you do to help your learners cope when they have to prepare for assignments and examinations.

Teacher	*What I normally, almost I only give feedback e.g. if I divided them into groups they have their presentation I will come again and give them feedback.*
Interviewer	What do you do when your learners experience problems with reading or writing or understanding new content you teach?
Teacher	*Ok I normally I find time e.g. I find time sometimes I call that learner then we sit I explain how he can manage do some of the things we fail.*
Interviewer	Do you believe Grade 8 learners can take responsibility for their own learning?
Teacher	*Yes I believe so, how, I believe giving them time if I have seen this if you give them time able to do conduct themselves.*
Interviewer	Please explain what you do to help your learners make their own decisions on where, when, how and with whom to study.
Teacher	*When I normally when is the time about examination I tell them to draft themselves personal timetable and stick to their personal study time table.*
Interviewer	Which processes do your learners use to achieve academic goals?
Teacher	*First of all I help them how they should identify their goals, then I emphasize that they should stick to their goals.*
Interviewer	We have just elaborated on the meaning of the concept of self-regulated learning. Please describe the activities you think are needed to implement self-regulated learning in the subjects in which you are involved.
Teacher	*Ok , activities needed, we also want some school tour where learners go see the Heros-arc, to background knowledge*
Interviewer	Which specific actions do you take to develop self-regulated learning skills in your learners?
Teacher	*Now since we do not have some funds to go for tours, I download videos on historical event and I come to show.*
If vague answers are given the above question, follow-up questions will be asked to clarify what is meant by specific actions:	
Interviewer	How do you teach your learners to:
Interviewer	plan,
Teacher	*I normally giving them activities.*
Interviewer	set goals,
Teacher	*I normally ask them what symbol what's to achieve*
Interview	use different strategies,
Teacher	*I normally , I come up with pair or one on one (individual work)*
Interviewer	reflect on their work,
Teacher	*Sometimes I tell them to do correction by themselves e.g. I given them work this one you have to do your correction*

Interviewer	evaluate their understanding and progress?
Teacher	*After teaching a certain basic competence I give a test then learners will be able to see far on the competency I have taught them.*
Interviewer	How does your planning to develop learners' self-regulated learning help you to develop your own self-directedness as a teacher?
Teacher	*Ok, it helps me how far am with my learners if am too much on myself with the teaching learners are able to comply with self-regulated learning.*

ADDENDUM D OBSERVATION NOTES

Observation notes

Participant No.1

School: School 2

Class: 8

Subject[redacted]

Time: 07:30-08:10

Date : 21 June 2017

Observation themes	Rating	Observation notes
1. The participant teaches self-regulated skills direction	Rarely observable	Participant instructed learners to on they must do e.g. read from the chalkboard,
2. The participant teaches self-regulated skills indirectly to learners	Often observable	Participant uses plant leaf to explain how photosynthesis takes place.
3. The participant teaches learners strategies like self-questioning, planning, monitoring and understanding	Often observable	Participant ask question, instruct learners to write notes
4. The participant use verbal feedback to develop self-regulated skills	Often observable	Participant instructs one learner to read the word to the whole class and one learner writes the word on the chalkboard.
5. The participant encourages self-evaluation and reflection to develop self-regulated skills.	Often Observable	Participant instructs learners to present their findings in the class after the activity Instructs learners to ask questions to each group.
6. The participant shows learners how to use different learning strategies /model use of different learning strategy	Mainly observable	Participant used questioning at first later learners were given individual work as well as group work.
7. The participant gives leaners the opportunity to take responsibility of their own learning	Often observable	Participant gives the work to learners to complete individually later a group work- each group to select a presenter and secretary
8. The participants uses forms of cooperative learning to develop self-regulated skills	Often observable	The participant used group work and helped learners by moving from one group to another one
9. The participant develop motivation and self-efficacy	Often Observable	Participant called learners by names and uses words to motivate learners such as good, thank you, read aloud.
10. The participant uses questioning as a technique to encourage encouraging monitoring of progress.	Often observable	The participant asked learners questions e.g. write down the term equation and mention the formula
11. The participant ensure the physical environment of the class is conducive for development of SRL.	Mainly observable	The classroom was clean and neat, the windows were open for proper ventilation and learners sat in groups of five.
12. The participant intervenes when learners do not understand.	Mainly observable	The participant re explain the topic after two activities, rewrites the notes again on the chalkboard

13. The participant prompts the learners to active prior-knowledge and integrates new knowledge.	Often observable	The participant asks learners questions to test their knowledge
14. The participant allows the learners to take responsibility for structuring their learning by giving them some freedom of decision making.	Mainly observable	The participant used group discussion.
15. The participant makes learners aware of time management.	often observable	Participant reminded learners about time management during question period and group discussions
16. The participant makes learners aware of goal setting.	often observable	The participant ask learners after presenting and ask them to read the topic at home and present the next day

ADDENDUM E: INTERVIEWS CODES

Participant No 1 School 1		
Theme **Self – regulated learning**	**Sub-themes 1** Perception about SRL	**Codes**
	Participants' understanding of the concept SRL	• *…it means this is the way of giving learner an opportunity to express what they want to say.*
	Perspectives about teachers' roles in developing SRL	• *…a teacher your role is more of facilitating them, guiding them, everything is from learners, themselves.* • *…but of not familiar to self- regulating, I have heard about this concept but I am more familiar with learner centred education. So I am relating learner-centred to self-regulated learning.* *…the learning itself is centred to them. …the role of teachers is facilitator, so I apply is just the facilitator goes to help them, assist them..*
	Perceptions of social and physical environment	• *I think negatively* • *Lack of resources and support for example if they go home if that learner is eager of learning himself maybe the parent are not after this learner are you having a homework.*
	Value of SRL for academic learning	• *..it helps learners to come to the centre of learning itself unlike teacher centred whereby most of things, come from the teacher but you see when you conduct self-regulated learning in class learners themselves will be able to come up with ideas counter of some of the topics.*
	Awareness of SRL concept	• *I have heard about this concept but I am more familiar with learner centred education* *it helps me how far am with my learners if am too much on myself with the teaching learners are able to comply with self-regulated learning.*
	Training to use and develop SRL	• *I have never attended the workshop* • *I have never* • *Yes…reflected like through learner-centred since the ministry, emphasising the issue of learner-centred education itself.*
Theme 2: Perception of how SRL is developed		
Sub-themes: SRL development in the forethought phase	**Strategic Planning**	• *I find time sometimes I call that learner then we sit I explain how he can manage do some of the things we fail*
	Goal setting	• *all I help them how they should identify their goals* • *ask them what symbol what's to achieve*
	Motivational belief	• …encourage learners to work very hard in class.
	Self-efficacy	•
	Task interest	•
	Goal orientation	•
	Outcome-expectation	• I give them instructions before

		• Sometimes I tell them what to do and why/
Sub-themes: SRL development in the Volitional phase	Developing task strategies	•
	Group work	• *…I give a group for discussions* *.. I group learners into groups not big about 4 to 5.*
	Time management	• *…time about examination I tell them to draft themselves personal timetable and stick to their personal study time table* • *only giving them more time when you give them an activity*
	Cognitive strategies	• *…some learners are able to come up with ideas, they design this topic in a sense very well.*
	Reflection	• *…I tell them to do correction by themselves e.g. I given them work this one you have to do your correction*
	Assessment	• *I give a test then learners* • *, they have to complete that an assessment are given to them so unlike for example when they take long you are discouraged then you centre yourself giving them more time will help*
	Self-observation	
	Help seeking	• *…we also want some school tour where learners go see the Heros-arc, to background knowledge*
	Environmental structuring	
Sub-themes: SRL development in the self-reflection phase	Self reflection	• *…almost I only give feedback e.g. if I divided them into groups they have their presentation I will come again and give them feedback.*
	Building realistic attributions for success or failure	• *Yes I believe so, how, I believe giving them time if I have seen this if you give them time able to do conduct themselves* • *extra time giving out themselves find information unlike here you see that they are given homework they struggle.* •
	Adoption to teaching strategies	• *…desirable having resources e.g. having libraries learners should be able find time,* • *…I download videos on historical event and I come to show.*

ADDENDUM F AVERAGE DEMONSTRATION OF DEVELOPMENT OF SRL

Classification to fourteen participants in lower and average demonstration of SRL development.

Main Themes	Sub-themes	Key 1	Participant Site A							Participant Site B							Category
			1	2	3	4	5	6	7	1	2	3	4	5	6	7	
Development of self-regulation learning strategies in grade 8 learners	1. Develop SRL skills directly	NB															Lower demonstration of SRL development
		RB	✓	✓	✓	✓			✓	✓	✓	✓	✓			✓	
		OB						✓						✓	✓		
		MB															
	2. Develop SRL skill indirectly	NB												✓			Average demonstration of SRL development
		RB					✓	✓	✓								
		OB			✓					✓	✓		✓		✓	✓	
		MB	✓	✓		✓						✓					
	3. Teaches self-questioning, planning, monitoring understanding	NB															Average demonstration of SRL development
		RB													✓		
		OB		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓	
		MB	✓								✓						
	4. Use of verbal feedback to develop SRL	NB															Lower demonstration of SRL development
		RB					✓	✓	✓					✓	✓		
		OB	✓		✓	✓				✓	✓	✓	✓			✓	
		MB		✓													
	5. Self-evaluation and reflection	NO							✓								Avarege demonstration of SRL development
		RB					✓	✓									
		OB	✓	✓		✓				✓	✓	✓	✓	✓	✓	✓	
		MB			✓												
	6. Use different learning strategies/ model	NB															Average demonstration of SRL development
		RB					✓	✓						✓	✓		
		OB		✓	✓	✓			✓		✓	✓				✓	
		MB	✓							✓							
	7. Gives opportunity to take responsibility	NB															Average demonstration of SRL development
		RB												✓	✓		
		OB	✓				✓	✓	✓	✓	✓	✓	✓				
		MB		✓	✓	✓										✓	
	8. Use cooperative learning to develop SRL	NO													✓		Average demonstration of SRL development
		RB			✓									✓			
		OB				✓	✓	✓	✓	✓	✓	✓					
		MB	✓	✓									✓			✓	
	9. Develop motivation and self-efficacy	NB															Average demonstration of SRL development
		RB												✓	✓		
		OB	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	
		MB		✓													
	10. Uses question as a technique to encourage monitoring progress	NB															Average demonstration of SRL development
		RB												✓	✓		
		OB			✓	✓	✓	✓	✓	✓			✓			✓	
		MB	✓	✓							✓	✓					
	11. Ensure physical environment of the class is conducive to develop SRL	NO															Average demonstration of SRL development
		RB					✓	✓									
		OB		✓	✓				✓					✓	✓	✓	
		MB	✓			✓				✓	✓	✓	✓				
		NB												✓	✓		
		RB	✓				✓	✓									

	12. Intervenes when learners do not understand	OB			✓	✓			✓							✓	Average demonstration of SRL development
		MB		✓						✓	✓	✓	✓				
	13. Prompts the learners to activate prior knowledge and integrate new knowledge	NB															Average demonstration of SRL development
		RB												✓			
		OB			✓	✓	✓	✓	✓	✓	✓		✓		✓	✓	
		MB	✓	✓	✓							✓					
	14. Allows learners to take responsibility for their learning by giving freedom of decision making	NB															Average demonstration of SRL development
		RB												✓	✓		
		OB	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				
		MB								✓						✓	
	15. Time management	NB						✓									Average demonstration of SRL development
		RB	✓				✓		✓					✓	✓		
		OB		✓	✓	✓				✓	✓	✓	✓			✓	
		MB															
	16. Make learner aware of goal setting	NB			✓												Lower demonstration of SRL development
		RB	✓	✓		✓	✓	✓	✓					✓	✓		
		OB								✓	✓	✓	✓			✓	
		MB															
Overall rating each participant		**Key 2**	**A**	**A**	**A**	**L**	**L**	**L**	**A**	**A**	**A**	**L**	**A**	**L**	**L**	**A**	

ADDENDUM G PERMISSION LETTER FROM THE DIRECTOR OF MBEAC, ZAMBEZI REGION

Ministry of Education, Arts and Culture	**REPUBLIC OF NAMIBIA** **ZAMBEZI REGIONAL COUNCIL** **DIRECTORATE OF EDUCATION** **OFFICE OF THE REGIONAL DIRECTOR**	Zambezi Regional Council

Tel No.: (066) 261902/931
Fax No.: (066) 253187

Private Bag 5006
Katima Mulilo

Enquiries: **J.M Shitaa**

Reference No:

07 April 2016

Northern-West University
Potchefstroom Campus
Private Bag X6001
South Africa
2520

RE: APPROVAL FOR RESEARCH PROJECT: MR SIKWANGA HUMPHREY

Reference is made to the subject matter above.

Approval is hereby granted by the office of the Regional Director for you to carry out your research project as requested. However, kindly be informed that such granted approval should not interfere with the teaching and learning at those schools you intend visiting.

By a copy of this notice the Inspectors of Education are notified accordingly.

Counting on your understanding and cooperation in this regard!

Thank you,

2016 -04- 07
Office of the Director
Private Bag 5006 - Katima Mulilo

AUSTIN M SAMUPWA
REGIONAL DIRECTOR, MAC

ADDENDUM H PERMISSION LETTER FROM THE TWO SCHOOL PRINCIPALS

NORTH-WEST UNIVERSITY
YUNIBESITI YA BOKONE-BOPHIRIMA
NOORDWES-UNIVERSITEIT
POTCHEFSTROOM CAMPUS

Permission to research project

"Perspectives of Namibian teacher' development of grade 8 learners' self-regulated learning"

LETTER OF THE PREMISSION: Principal

I, Tebuho Kenneth Nsundano (Name and Surname)

The principal of Sam Nujoma C/school (School Name)

Hereby give my permission to conduct the above mentioned research project at my school. I am aware that teachers' participation in this research remains voluntary and that they at any time may withdraw from the research. I also understand that all personal information of teachers will be kept confidential and that the name of the school will not be revealed in results and findings of the study.

Tebuho. K. N.
Name

Signature

2017
School Stamp

04 April 2017.
Date

NORTH-WEST UNIVERSITY
YUNIBESITI YA BOKONE-BOPHIRIMA
NOORDWES-UNIVERSITEIT
POTCHEFSTROOM CAMPUS

Permission to research project

"Perspectives of Namibian teacher' development of grade 8 learners' self-regulated learning"

LETTER OF THE PREMISSION: Principal

I, KINGSLEY JULIUS MAKHOSI (Name and Surname)

The principal of LUSESE C. SCHOOL (School Name)

Hereby give my permission to conduct the above mentioned research project at my school. I am aware that teachers' participation in this research remains voluntary and that they at any time may withdraw from the research. I also understand that all personal information of teachers will be kept confidential and that the name of the school will not be revealed in results and findings of the study.

K. J. MAKHOSI

Name

Signature

School Stamp

LUSESE COMBINED SCHOOL
The Principal
Po Box 3200, Ngweze
Date 2017 -04- 04
Tel: (066) 254 379
MINISTRY OF EDUCATION, SPORT & CULTURE

ADDENDUM I CONSENT LETTER FORM FOR PARTICIPANTS

NORTH-WEST UNIVERSITY
YUNIBESITI YA BOKONE-BOPHIRIMA
NOORDWES-UNIVERSITEIT
POTCHEFSTROOM CAMPUS

Permission to research project

Research topic*: "Perspectives of Namibian teachers' development of grade 8 learners' self-regulated learning"*.

LETTER OF THE PREMISSION: Teacher

I, _____ (Name and Surname)

A teacher at _____ (School Name)

Hereby give my consent to participate in the above mentioned research project. I am aware that teachers' participation in this research remains voluntary and that they at any time may withdraw from the research. I also understand that all personal information of teachers will be kept confidential and that the name of the teacher or school will not be revealed in results and findings of the study.

_____ _____

Name Signature

_____

Date

ADDENDUM J ETHICS APPROVAL

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

Private Bag X6001, Potchefstroom,
South Africa, 2520

Tel: (018) 299-4900
Faks: (018) 299-4910
Web: http://www.nwu.ac.za

Institutional Research Ethics Regulatory Committee

Tel: +27 18 299 4849

Email : Ethics@nwu.ac.za

ETHICS APPROVAL CERTIFICATE OF STUDY

Based on approval by the **Ethics Committee of the Faculty of Education Sciences (ESREC)** on **21/04/2016,** after being reviewed at the meeting held on **17/03/2016**, the North-West University Institutional Research Ethics Regulatory Committee (NWU-IRERC) hereby **approves** your study as indicated below. This implies that the NWU-IRERC 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: Perspectives of Namibian teachers' development of grade 8 learners' self-regulated learning.

Project Leader: **Dr BW Geduld**
Project Team: **Dr E Lubbe en Mr H Sikwanga**

Ethics number: N W U - 0 0 1 8 4 - 1 6 - A 2
(Institution / Study Number / Year / Status)

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

Application Type: N/A

Commencement date: 2016-04-21 **Expiry date**: 2017-10-21 **Risk:** N/A

Special conditions of the approval (if applicable):

- Translation of the informed consent document to the languages applicable to the study participants should be submitted to the ESREC (if applicable).
- Any research at governmental or private institutions, permission must still be obtained from relevant authorities and provided to the ESREC. Ethics approval is required BEFORE approval can be obtained from these authorities.

General conditions:

While this ethics approval is subject to all declarations, undertakings and agreements incorporated and signed in the application form, please note the following:

- *The study leader (principle investigator) must report in the prescribed format to the NWU-IRERC via ESREC:*
  - *annually (or as otherwise requested) on the progress of the study, and upon completion of the project*
  - *without any delay in case of any adverse event (or any matter that interrupts sound ethical principles) during the course of the project.*
  - *Annually a number of projects may be randomly selected for an external audit.*
- *The approval applies strictly to the proposal as stipulated in the application form. Would any changes to the proposal be deemed necessary during the course of the study, the study leader must apply for approval of these changes at the ESREC. Would there be deviated from the study proposal without the necessary approval of such changes, the ethics approval is immediately and automatically forfeited.*
- *The date of approval indicates the first date that the project may be started. Would the project have to continue after the expiry date, a new application must be made to the NWU-IRERC via ESREC and new approval received before or on the expiry date.*
- *In the interest of ethical responsibility the NWU-IRERC and ESREC retains 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 project are revealed or suspected,*
    - *it becomes apparent that any relevant information was withheld from the ESREC or that information has been false or misrepresented,*
    - *the required annual report and reporting of adverse events was not done timely and accurately,*
    - *new institutional rules, national legislation or international conventions deem it necessary.*
- *ESREC can be contacted for further information or any report templates via Erna.Conradie@nwu.ac.za or 018 299 4656*

The IRERC would like to remain at your service as scientist and researcher, and wishes you well with your project. Please do not hesitate to contact the IRERC or ESREC for any further enquiries or requests for assistance.

Yours sincerely

Prof LA Du Plessis

Digitally signed by Prof LA Du Plessis
Date: 2016.09.12 09:12:58 +02'00'

Prof Linda du Plessis
Chair NWU Institutional Research Ethics Regulatory Committee (IRERC)

CERTIFICATE OF LANGUAGE EDITING

H C Sieberhagen
SATI no 1001489
Hettie.Sieberhagen@nwu.ac.za

Translator and Editor
082 3359846
018 2994554

CERTIFICATE
OF LANGUAGE EDITING
issued on 20 November 2017

I hereby declare that I have edited the language of the dissertation

Perspectives of Namibian teachers' development of grade 8 learners' self-regulated learning

by

HS SIKWANGA

orcid.org/0000 0002 8477 2491

Dissertation submitted in fulfilment of the requirements for the degree

Master of Education in Curriculum Studies

at the North-West University

The responsibility to accept recommendations and effect changes remains with the author

H C Sieberhagen

SATI no 1001489
ID 4504190077088