A Qualitative Perspective of High Academic Achievers' Self-Regulated Learning,

Learning Styles, and Learning Strategies

KATE SURMON

213569818

Submitted in partial fulfilment of the requirements for the degree of

Master of Social Sciences (Research Psychology), in the Graduate Programme in the

Discipline of Psychology, School of Applied Human Sciences, University of KwaZulu-Natal,

Pietermaritzburg.

July 2019

Declaration

I, Kate Pamela Surmon, declare that

1. The research reported in this thesis, except where otherwise indicated, is my original research.

2. This thesis has not been submitted for any degree or examination at any other university.

3. This thesis does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons.

4. This thesis does not contain other persons' writing, unless specifically acknowledged as being sourced from other researchers. Where other written sources have been quoted, then:
a. Their words have been re-written but the general information attributed to them has been referenced
b. Where their exact words have been used, then their writing has been placed inside quotation marks, and referenced.

5. This thesis does not contain text, graphics or tables copied and pasted from the Internet, unless specifically acknowledged, and the source being detailed in the thesis and in the References sections. The cover page from a Turnitin report generated from this dissertation is included as Appendix 8.
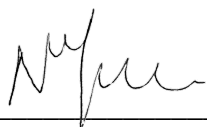
Student Signature

05 July 2019

Date

Nicholas Munro

Name of Supervisor

Signature

Abstract

Pressure from global and local changes have necessitated the need for transformation in higher education institutions. This has given rise to numerous studies conducted on teaching and learning in higher education. In the past, research efforts have tended to focus on academic underachievement and failure, and have inadvertently established a deficit discourse in South African higher education literature. This study responds to this deficit discourse by shifting the focus to high academic achievement. Specifically, this study sought to gain insight into high academic achievers' learning through the use of a qualitative methodology. Self-Regulated Learning theory as well as a Learning Styles theory provided the theoretical framework for the study. Semi-structured interviews were conducted with six high academic achievers studying at the University of KwaZulu-Natal. Semantic thematic analysis was conducted in order to determine themes and patterns within the responses of these high academic achievers. Findings demonstrated the importance of the ability to self-regulate one's learning, and gave insight into specific learning strategies used by high academic achievers when approaching study related tasks. Findings also suggest that high academic achievers display certain characteristics which are perceived to influence achievement, these include self-awareness, general motivation, and a proactive and disciplined attitude.

Keywords: self-regulated learning, learning styles, learning strategies, high academic achievers

Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction

1.1) Introduction

Chapter 1 provides the contextual background to the study. Firstly, the researcher explains her personal background leading to her interest in student study skills and behaviours. Secondly, the motivation for this research is stated against the background of needing to enhance teaching and learning in South African higher education institutions so as to improve academic outcomes; and needing to give greater attention to high academic achievement in order to shift focus away from the current deficit discourse in South African higher education literature. The aim, objectives and research questions are then presented. The chapter concludes by providing an outline of the structure of the remaining chapters.

1.2) Personal Background to this Study

This study grew out of my experiences in the year prior to starting my Master's degree in research psychology. In that year I worked as a Learning Support Facilitator under the guidance of an Educational Psychologist in Pietermaritzburg, KwaZulu-Natal. As a Learning Support Facilitator I provided a wide range of assistance to learners, however, what I noticed is that majority of the students (Primary and Secondary school) came to me for study guidance, not for extra content-focused lessons. Instead of assisting students with particular subject content, many students needed assistance with managing their studies as well as developing study skills. A number of students came to me for a few lessons purely on study skills, time management and organisation, especially around exam time. Other students came on a weekly basis in order to get help managing their studies. For example, together we would set termly goals, I would help them prioritise the week's work, assist them with their understanding of the task requirements, and develop a plan of action for how the task could be approached and completed. My experience with these learners sparked my interest in the

field of students' study habits, attitudes and skills. I spent quite a bit of time researching how best to assist students in developing good study skills and this led me to research on self-regulated learning (SRL), learning styles and learning strategies. This personal background contributed to the development of the study presented in this dissertation, which aimed to explore the learning strategies and characteristics of high academic achievers. The intention was for the knowledge gained from the study to be used to inform ways in which all students can be assisted to develop the skills necessary to be successful independent learners.

1.3)   Motivation for the Research

1.3.1) Transforming South Africa's higher education system.

With the introduction of the 'new world order' in the late 1980s came socio-economic and political change that asserted pressure on all areas of society including higher education (Maassen & Cloete, 2004). This new world order can be referred to as globalisation, and the changes associated with globalisation compelled nation states to re-orientate and reposition higher education institutions. Specifically, higher education institutions became part of national development policies in countries world-wide (Maassen & Cloete, 2004).

In 1994 South Africa felt its biggest social and political transition which influenced the reform of higher education. Soon after the first democratic elections in 1994, Nelson Mandela issued a proclamation appointing a National Commission on Higher Education (NCHE) to "preserve what is valuable and to address what is defective and requires transformation" (NCHE, 1996, p. 1). This pressure from globalisation trends as well as the acknowledgement that education is directly linked to the social and developmental success of a country led to the issue of education being given priority status in South Africa. South Africa's higher education reform agenda focused on national topics resulting from the Apartheid legacy (Maassen & Cloete, 2004). These topics included redress, democratisation and equity. One of the goals of higher education was to ensure equal opportunity for access to

quality education which would result in a reduction of the problems of skills shortage and economic and social inequalities (Letseka & Maile, 2008). On a global level, the higher education agenda was to promote efficiency, effectiveness, responsiveness and competition (Maassen & Cloete, 2004). These nation-specific as well as global agendas continue to influence current views of transformation in higher education in South Africa public universities.

As a result of these transformation pressures, Universities South Africa (USAf) – the representative organisation for South Africa's public universities – has identified a number of challenges facing the university sector, one of them being access and success. In the years following 1994, emphasis was placed on widening student participation in university. The focus was on dealing with educational disadvantage as expressed by the Council on Higher Education [CHE] (2010). When speaking about 'success', the literature on performance at South African universities equates success with completing a course or degree. As stated by Mahlangu (2016), "studies conducted in South Africa on higher education indicate that most students are not academically successful at university, in other words they leave the universities before completing their academic programmes or degrees" (p. 20). This lack of success (ie: failure and dropout rates) has become a concern (CHE, 2013; Letseka & Maile, 2008). This has led to what the CHE (2010) refers to as the third generation of the access and academic performance debates in South Africa.

In this third generation of access and performance debates, academic performance is measured using input and output indicators such as throughput rates, graduation rates and dropout rates (CHE, 2010). These indicators have framed academic performance in a negative light – highlighting the problem of underachievement and failure (CHE, 2013). Studies such as those conducted by Coleman (2016) investigate factors influencing these failure and dropout rates in South African universities. The goal of such studies it to make

use of the findings in order to inform corrective measures so as to increase the graduation rate. These investigations have primarily focused on students and their 'deficiencies' (i.e., what they lack academically) (Coleman, 2016). The trend toward improving retention and throughput focuses on remediating what is *wrong* with students. This emphasis on student deficiencies has contributed to a deficit discourse in South African higher education (Smit, 2012). In order to shift away from this deficit mode of thinking, researchers in higher education in South Africa have argued for the need to turn attention away from what might be "wrong" with the student toward the universities themselves, focusing on the structures, values, principles, and knowledge practices of universities (Coleman, 2016).

This study supports this move away from deficit thinking, but argues that anti-deficit research does not necessarily have to move away from the student toward a focus on university structures and values. Instead, another way to avoid a deficit conceptualisation of students it to focus on high academic achievement as opposed to underperformance or failure. This focus on high academic achievement is a relatively new agenda which aligns with University goals of achieving excellence. It is argued that a focus on high academic achievement will better assist in achieving long-term intellectual and socio-economic growth and transformation in South Africa, therefore, higher education must engage with and understand the students who excel, as well as those who fail. As suggested by Rivera (2005), no real improvement is likely to happen to those at the bottom of the achievement gap if serious attention is not given to the goals of excellence in academic achievement.

1.3.2) Studying student achievement.

In order to understand the reasons for high failure rates, dropout and underachievement, researchers in the field of education have conducted numerous studies investigating factors influencing academic performance and achievement outcomes. While some explore the topic from a contextual view, highlighting factors such as socio-economic

4

status, previous schooling, parents' education, and family income (e.g: Juan & Visser, 2015; Kim, 2015; van Zyl-Schalekamp & Mthombeni, 2015), other studies focus on factors considered intrinsic to the individual student, such as self-motivation, student effort, academic anxiety, attitude, emotion, personality, IQ, and learning preferences (e.g: Ciorbea & Pasarica, 2013; Pekrun, Goetz, Titz & Perry, 2010; Petersen, Louw & Dumont, 2009; Robbins et al., 2004).

Studies conducted on factors influencing achievement do not only vary according to their focus, but also according to their aim. While some aim to provide evidence for ways in which institutional processes can be addressed – for example suggesting ways in which teaching and the curriculum can be improved in order to accommodate student differences (e.g: Bostrom & Lassen, 2006; Cekiso, 2011; Hess & Frantz, 2014), others offer more of a student-focus – suggesting ways in which students can be supported to develop the skills necessary to succeed (e.g: Aquino, 2011; Padma, 2013; Paris & Paris, 2001). The former is aligned with beliefs that student performance can be improved through changes at an institutional level whereas the latter supports changes at the student level.

This study is in line with the latter focus and aim. This study focuses on factors considered intrinsic to the individual, and aims to enhance student learning through contributing to literature suggesting strategies and interventions that can improve students' learning skills and abilities. This study aimed to explore student learning through understanding the learning strategies and characteristics that high academic achievers perceive as important to their academic achievement. In order to gain understanding of how high academic achievers learn, this study made use of the theory of SRL and learning styles as a vehicle through which to explore what high academic achievers perceive as essential to their academic achievement.

1.4) A Qualitative Approach to Academic Achievement

When examining the literature on intrinsic factors influencing student academic achievement it is clear that a positivist quantitative approach prevails (eg: Al-Hebaishi, 2012; Gappi, 2013; Garton, Dyer & King, 2000; McCann, 2006; Seabi, 2011; Vermunt, 2005). Predetermined theory is applied to the problem of academic achievement, and correlations are made between aspects of the theory and academic achievement outcomes. In contrast, this study makes use of a qualitative approach to explore intrinsic qualities perceived to influence academic achievement. By making use of a qualitative approach, this study seeks to offer high academic achievers a voice in their own learning by allowing them to explain their perceptions of their learning and achievement. A qualitative approach therefore allows for greater depth of understanding of specific topics such as the use of SRL strategies and the perceptions of learning styles and their importance.

1.5) Research Aim, Objectives and Questions

The aim of this study was to determine and understand the self-reported learning strategies and characteristics of high academic achievers that influence their ability to achieve. In order to gain greater understanding of high academic achievers' learning strategies and characteristics the researcher developed four specific research objectives using concepts implicit in SRL and Learning Styles theory. The research objectives were:

1. To explore how high academic achievers self-regulate their academic learning, and the role this plays in high achievers' attainment of high academic achievement outcomes.

2. To explore the perceived preferred learning styles of high academic achievers, and how these preferred learning styles influence the study methods of high academic achievers.

3. To explore the learning strategies of high academic achievers and the perceived influence this has on high achievers' attainment of high academic achievement outcomes.

4. To explore factors that enable and inhibit high academic achievers' ability to self-regulate their academic learning; their ability to accommodate their learning style; and the use of their learning strategies.

Originally, four research questions were proposed – each directly related to the objectives respectively. Although the researcher used the proposed research questions in order to give structure and direction to the study, continued reading of the literature on SRL, learning styles and learning strategies, as well as engaging in an iterative process of data analysis, led to a minor refinement of the questions. The revised research questions were as follows:

1. How do high academic achievers self-regulate their academic learning, and what role does this play in high achievers' attainment of high academic achievement outcomes?

2. What are the perceived preferred learning styles of high academic achievers, and how do these preferred learning styles influence the learning techniques of high academic achievers?

3. What influences high academic achievers awareness and development of learning strategies, learning styles and learning techniques?

1.6) Defining Learning Strategies

In order to understand the remodelling of the research questions (explained in Chapter 3) it is necessary to understand the difference between learning strategies as applied to SRL versus Learning Styles theory. In this study, learning strategies as a concept is not presented as a separate topic, instead it is amalgamated into SRL theory as well as Learning Styles theory. Within SRL, learning strategies are the skills and processes used by individuals in order to enhance their learning. Four main categories of strategies have been defined namely: cognitive, metacognitive, behavioural/management, and motivational (de Boer, Donker-

Bergstra, & Kostons, 2012). Within the literature on Learning Styles, learning strategies are referred to as the techniques used in order to organise and learn the learning material. An individual's preferred learning style has an influence on the selection of strategies (Shelton-strong, 2017).

In order not to confuse the two learning strategy concepts (relating to SRL and then to Learning Styles), the term 'learning strategies' as used in this study refers to SRL strategies whereas the term 'learning techniques' is used when referring to the learning strategies as defined by literature on Learning Styles.

1.7)   Contribution of this Study

The contribution of this study is two-fold. Firstly, the study contributes to a growth in literature which moves away from a deficit discourse in higher education toward a focus on high achievement. Secondly, this study deepens understanding of high academic achievement through a qualitative approach. By deepening understanding of the concept of high achievement, the findings from this study may be used to expand literature which focuses on developing strategies to improve students' learning skills associated with high academic achievement.

1.8)   Dissertation Structure

In the following chapter (Chapter 2) the theoretical framework for this study is established through presentation of two concepts: SRL and Learning Styles.

Chapter 3 presents the study methodology. This chapter describes the studies epistemological approach and states the study aim, objectives and questions. The chapter then explains the data collection and analysis procedures. This chapter also addresses the measures taken to ensure credibility, dependability and rigour; as well as the study's ethical consideration. Finally, the study limitations are presented.

Chapter 4 presents the study findings. In this chapter the themes generated from the three main concepts/topics are presented. These three concepts relate to the research questions and include: SRL strategies; perceptions and use of learning styles; and influences on awareness and development of learning strategies, learning styles and learning techniques. A thematic map is presented for each concept and is further explained through presentation of interview extracts.

Chapter 5 presents the discussion of the findings. The research questions are used in order to give structure to the discussion and discussion chapter. Findings for each research question are discussed in relation to literature on SRL and Learning Styles where applicable. After discussing the findings in relation to the research questions, the findings are consolidated in order to address the study aim.

Chapter 6 concludes this dissertation by summarising the study purpose and findings, and providing direction for future research.

Chapter 2: Literature Review

2.1) Introduction

This chapter presents an overview of the literature covering SRL and Learning Styles. Although an argument can be made that SRL and Learning Styles as concepts could be amalgamated, this study addresses them separately. This chapter begins by presenting literature on SRL followed by literature on Learning Styles. The theoretical foundations and frameworks are given for SRL and Learning Styles, and each concept is related to academic achievement.

2.2) Self-Regulated Learning

2.2.1) Theoretical foundations and frameworks.

For over 40 years researchers have been investigating a variety of variables influencing student academic learning and achievement. Researchers acknowledge student individual differences and seek to understand these differences in order to suggest ways to accommodate them (Zimmerman, 2002). This interest in understanding student differences led to a growth in understanding metacognition as it related to learning and performance. Students' low performance was explained as a result of a lack of metacognitive awareness which is defined as "the awareness of and knowledge about one's own thinking" (Zimmerman, 2002, p. 65). This growth in awareness of metacognition led to increased interest in the individual processes involved in learning, thus leading to the development of the concept of SRL. The growth in understanding of self-regulating processes resulted in a shift in focus in educational research. Instead of focusing on how teachers needed to accommodate individual differences, SRL literature focused on what students needed to know about themselves. Therefore, it was argued that a teacher's role is not to simply accommodate the student's needs, but instead to empower the student to become self-aware of their differences so that they can take corrective action (Zimmerman, 2002).

According to SRL theory the student is seen as an active participant in their learning – learning is not a covert event that happens to them (Zimmerman, 2001). An individual is said to be able to self-regulate their own learning if he/she takes personal responsibility and control for their own acquisition of knowledge and skill (Zimmerman, 1990). Therefore, SRL highlights the importance of personal initiative in learning.

Due to the expanse of studies and literature on SRL, a number of models have been proposed emanating from different theoretical perspectives (Pintrich, 2000). These models include amongst others; operant, phenomenological, information processing, volitional, Vygotskian, cognitive constructivist, and social cognitive models of SRL. Although many models have been proposed – each of which emphasise different constructs and processes – all share some general assumptions and features as expressed by Pintrich (2000). Firstly, there is agreement that learners are active in the learning process and are not passive recipients of information. Secondly, it is assumed that learners are able to monitor, control, and regulate certain aspects of their cognition, motivation and behaviour as well as their environment. There is also consensus that biological, developmental and contextual elements may influence students' efforts at regulation indicating that self-regulation is not an asocial process. Thirdly, all models assume that learning is goal orientated – there is some type of standard against which the student assesses their learning and this influences their decision whether to change their learning process. Therefore, students are able to set a goal, monitor their progress toward this goal, and then adapt their cognition, motivation, behaviour and environment accordingly. A fourth general assumption is that self-regulation mediates the relationship between context and achievement. This is specifically relevant in the social cognitive view of self-regulation which highlights the interaction between person, behaviour and environment (Zimmerman, 1989).

Given the above assumptions, Pintrich (2000) defined SRL as "an active, constructive process whereby learners set goals for their learning, and then attempt to monitor, regulate, and control their cognition, motivation and behaviour, guided and constrained by their goals and the contextual features in the environment" (p. 453).

Integral to all theories on SRL is the understanding of various learning strategies influencing self-regulation. Broadly speaking, learning strategies can be defined as mental or behavioural events carried out by an individual in order to achieve a desired outcome, such as remembering a fact (Seifert, 1993). Theories of SRL refer to specific learning strategies that facilitate learning and enhance performance. In order to investigate these learning strategies, Zimmerman and Martinez-Pons (1986) conducted interviews with high school students to determine self-reported strategies used in a variety of contexts. They reported 14 types of strategies (see Table 2.1) that were supported by studies conducted in laboratory research – the type of research that constituted much of the research on SRL at the time. They also included a category labelled as 'other' for non-self-regulated behaviour. The 14 strategies were highly correlated with the students' achievement indices.

Table 2.1

Names and Definitions of 14 Self-Regulated Learning Strategies used by High School Students as Developed by Zimmerman and Martinez-Pons (1986)

Categories/Strategies	Definitions
1. Self-evaluating	Statements indicating student-initiated evaluations of the quality or progress of their work, e.g.: 'I check over my work to make sure I did it correctly.'
2. Organising and transforming	Statements indicating student-initiated overt or covert rearrangement of instructional materials to improve learning, e.g: 'I make an outline before I write my paper.'

3. Goal-setting and planning	Statements indicating student setting of educational goals or sub-goals and planning for sequencing, timing, and completing activities related to those goals, e.g.: 'first, I start studying two weeks before exams, and I pace myself.'
4. Seeking information	Statements indicating student-initiated efforts to secure further task information from non-social sources when undertaking an assignment, e.g.: 'before beginning to write an assignment, I go to the library and get as much information as possible concerning the topic.'
5. Keeping records and monitoring	Statements indicating student-initiated efforts to record events or results, e.g.: 'I took notes of the class discussion.' Or 'I kept a list of words I got wrong.'
6. Environmental structuring	Statements indicating student-initiated efforts to select or arrange the physical setting to make learning easier, e.g.: 'I isolate myself from anything that distracts me.' Or 'I turn off the radio so I can concentrate on what I am doing.'
7. Self-consequating	Statements indicating student's arrangement or imagination of rewards or punishment for success or failure, e.g.: 'If I do well on a test, I reward myself to a movie.'
8. Rehearsing and memorising	Statements indicating student-initiated efforts to memorize material by overt or covert practice, e.g.: 'In preparing for a maths test, I keep writing the formula down until I remember it.'
9 – 11. Seeking social assistance	Statements indicating student-initiated efforts to solicit help from peers (9), teachers (10), and adults (11), e.g.: 'If I have problems with my maths assignments, I ask a friend to help.'
12 – 14. Reviewing records	Statements indicating student-initiated efforts to reread tests (12), notes (13), or textbooks (14) to prepare for class or further testing, e.g.: 'When preparing for a test, I review my notes.'
15. Other	Statements indicating learning behaviour that is initiated by other persons such as teachers and parents, and all unclear verbal responses, e.g.: 'I just do what the teacher says.'

(Adapted from Zimmerman & Martinez-Pons, 1986).

More recent literature on SRL strategies has grouped these various strategies into four categories, namely: cognitive strategies, metacognitive strategies, behavioural/management strategies and motivational strategies. Cognitive strategies are domain or task-specific and

involve elaboration, rehearsal and organisation strategies. Elaboration helps the student connect new knowledge to prior knowledge. Rehearsal helps the student retain the information through repetition. Organisation strategies enable the student to visualise the material (de Boer et al., 2012).

Metacognitive strategies involve planning, goal-setting, organising, monitoring and evaluating one's performance according to self-set learning goals (Williamson, 2015). These strategies are used in the various phases of learning as described by Zimmerman (2002). Zimmerman distinguished between three phases: forethought, performance and self-reflection. During the forethought phase a student must make use of planning strategies such as allocating time spent on the task. Actual learning takes place during the performance phase, and requires strategies such as monitoring understanding of the material and adapting strategy use accordingly. In the final phase (self-reflection) the student evaluates the learning process and/or the product. During this phase, evaluation and reflection strategies are used (de Boer et al., 2012).

Behavioural strategies are sometimes referred to as management strategies and are used to select and create the optimal learning environment (Zimmerman, 1990). These can be aimed at the learner him/herself, at others, or at the physical environment (de Boer et al., 2012). When aimed at the learner, strategies include effort management. When aimed at others, strategies include help-seeking and collaborative learning. When aimed at the environment, strategies include making use of study aids, going to the library, and construction of one's study environment (de Boer et al., 2012).

Motivational strategies refer to the motivational beliefs that explain why a student undertakes a task. In order to regulate their motivational beliefs, self-regulated learners regulate their goal orientation, self-efficacy, perceptions of task difficulty, task value beliefs, and personal interest in the task (Pintrich, 2004). Due to the recognition of the influence of

motivation on self-regulation, a number of conceptual frameworks for understanding motivation and SRL have developed (Pintrich, 2004).

One way of understanding motivation is along the intrinsic extrinsic divide as expressed in Self-Determination Theory (SDT) (Ryan & Deci, 2000). When a student engages in an activity or task because it is perceived as interesting or personally important, the student is said to be intrinsically motivated (Reeve, Ryan, Deci, & Jang, 2008). In contrast, extrinsic motivation refers to motivation arising from external goals. When a student is extrinsically motivated, they engage in a learning task in order to achieve an outcome that is separate from the task itself (de Bilde, Vansteenkiste, & Lens, 2011). A third type of motivation includes amotivation. Amotivated individuals believe their behaviour is caused by external pressures not within their control (Petersen et al., 2009). Studies have shown that intrinsic motivation is associated with higher academic grades as well as other positive learning outcomes (Vansteenkiste, Zhou, Len, & Soenens, 2005).

The majority of theorists and researchers believe that self-regulated learners are more intrinsically motivated – they are motivated to complete a task due to their high task value. Task value is defined as the degree to which the task is considered relevant, important, and worthwhile (Eccles & Wigfield, 2002). Students can increase their intrinsic motivation for a task by attempting to make it more interesting, or by making it more relevant to their careers, experiences or lives (Pintrich, 2004). Students may also increase extrinsic motivation by promising themselves rewards such as being allowed to take a nap or watch television (Wolters, 1998).

As stated by Paulino, Sa and Lopes da Silva (2016), self-regulation of motivation "can be described as the actions through which individuals intentionally initiate, maintain or increase their level of motivation to engage in a given task, complete it and/or reach a goal" (p. 196). From this definition motivation is seen as task-specific. This task-focus is evident

throughout the literature on SRL – not just when looking at motivational strategies, but also at SRL process in general. For example, as indicated in Zimmerman's three phase model, SRL involves engagement of strategies prior to commencing a task, during the task, as well as upon completion of a task (Zimmerman, 2002).

More recently, through the analysis of specific components of SRL such as motivation, researchers are going beyond this task focus of SRL. One such model is the Future Time Perspective (FTP) (Zimbardo & Boyd, 1999). According to the FTP, students can be preoccupied with a certain time zone thus developing a dominant time perspective (de Bilde et al., 2011). This time perspective impacts one's key judgments, decisions and actions. Husman and Lens (1999) define FTP as "the present anticipation of future goals" (p. 115). A long or deep FTP evolves by setting distant goals and developing a range of intermediate projects in order to reach those goals (de Bilde et al., 2011). Studies have shown that being future-orientated or having a deep FTP is associated with higher academic achievement (Zimbardo & Boyd, 1999) as well as other positive learning outcomes (Harber, Zimbardo, & Boyd, 2003; Jackson, Fritch, Nagasaka, & Pope, 2003; Peetsma, 2000). Zaleski (1987) found that students with long-term goals are more persistent in carrying out their work, and derive a greater sense of satisfaction from studying. de Bilde et al (2011) also found that being able to foresee the future consequences of present behaviour leads students to be able to better manage and plan their study time and remain focused on the task at hand. This suggests that a FTP influences the use of SRL strategies. Therefore, researchers have begun to study the relationship between SRL and time perspective (eg: Zebardast, AliBesharat, & Hghighatgoo, 2011).

2.2.2) Self-regulated learning and academic achievement.

Originally, qualitative studies were used in order to gain understanding of SRL strategies and processes leading to high academic achievement and performance

(Zimmerman and Martinez-Pons, 1986). After these initial qualitative studies conducted in order to understand these processes, most SRL researchers have taken the theory and applied it through a top down approach, making changes to theory depending on the results of numerous quantitative outputs. This shift toward a quantitative focus has remained prominent in SRL studies (Patrick & Middleton, 2002). Most studies conducted on SRL and academic achievement seek to correlate academic achievement outcomes with various SRL strategies. In order to do this, researchers make use of self-report surveys and questionnaires such as the Self-Regulated Learning Interview Schedule (SRLIS) developed by Zimmerman and Martines-Pons (1986); the Learning and Study Skills Inventory (LASSI) designed by Weinstein, Palmer and Schutle in 1987; and the Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich, Smith, Garcia & McKeachie, 1991).

The goal in studies of SRL and its influence on academic achievement is not only to understand SRL, but rather to make use of this understanding in order to develop ways in which to assist students in developing SRL. Studies have indicated that students are ill-equipped to deal with the demands of SRL and therefore need to be taught specific SRL strategies such as making proper summaries, monitoring and evaluating their own performance, and maintaining motivation (de Boer et al., 2012; Pintrich, 2004; Zimmerman, 1990). It is argued that it is unlikely that students will develop effective learning strategies on their own and they therefore need instruction from teachers (de Boer et al., 2012).

Research has shown that instructional strategies have proven effective for encouraging SRL (Zumbrunn, Tadlock, & Roberts, 2011). These instructional strategies should include direct instruction and modelling, guided and independent practice, and social support and feedback (Zumbrunn et al., 2011). Direct instruction involves explicitly teaching strategies and demonstrating how they can be used. Through guided and independent practice the student is given the opportunity to implement the strategy with the help of the teacher,

and then on their own. Students need to have frequent opportunities to practice self-regulation in order to maintain the skills over time (Zumbrunn et al., 2011). Studies have shown that students more often engage in SRL strategy use when they receive regular support and feedback from teachers and peers (Patrick, Ryan & Kaplan, 2007). This feedback should involve information on what the student did well in, where they could improve, and how this improvement can be achieved (Zumbrunn et al., 2011).

2.3) Learning Styles

2.3.1) Theoretical foundation and frameworks.

Over the years the shift toward an emphasis on the learner and learning as opposed to the teacher and teaching has led to the increased interest in understanding the unique and diverse ways in which individuals learn (Cekiso, 2011). Although this shift led to increased investigation into individuals' self-regulatory abilities as applied to learning, it has also given rise to the idea of learning styles. This concept of learning styles has gained increasing attention in the literature in South African higher education due to the pressures to widen access to a diversity of students (Cekiso, 2011). Universities are recognising the need for flexibility in order to accommodate a student body which possess a wide variety of approaches to learning (Lowery, 2009). It is argued that understanding student learning styles would allow for better understanding of this student body and their different approaches to learning.

When seen against the background of the wider debate on student retention, it is argued that the profiling of learning styles proves beneficial because it provides educators in different subjects and modules with information on their students' learning preferences. This student profiling could be used to identify students at risk of failure (ie: students with a learning style not accommodated by the predominant teaching strategy). Educators could then use this information in order to adjust their teaching methods to the needs of their learners. In other words, the goal is to ensure that the curriculum is appropriately tailored toward the

students (Coffield, Moseley, Hall & Ecclestone, 2004). Researchers argue that knowing the learning styles of successful students in a particular field can assist with planning strategies for effective intervention in order to address the problem of attrition in higher education institutions (Du Plessis, Muller & Prinsloo, 2007). By taking students' learning style preferences into consideration, course material and delivery could be designed in order to cater for diversity (Cekiso, 2011). For example, Cekiso (2011) suggests that knowledge of students' learning style preferences can aid tertiary institutions in class preparation, designing class delivery methods, and choosing appropriate technologies. The debate around how learning styles can be used to make recommendations for "how pedagogical practices should be altered in order to improve student learning outcomes" (Glonek, 2013) is, however, unconvincing due to the plethora of models and various research outcomes.

Defining the term 'learning styles' is not a straightforward task due to the way in which literature uses the term interchangeably with others such as 'cognitive style' and 'learning strategy' (Cassidy, 2004). It is also difficult to find a unified, commonly agreed upon definition due to the vast number of theorists in the field; each of whom subscribe to their own model (Cassidy, 2004). Broadly speaking, learning styles refers to the preferred way that individuals receive, process, and retain information (Hess & Frantz, 2014). In this study, a learning style is defined as an individual's characteristic and preferred way of gathering, organising and thinking about information (Fleming, 2001). While some argue that a learning style is a relatively stable learner trait or characteristic (Cohen, 2010; Nel, 2008), others suggest that it is fluid, seeing it as a tendency which can be strengthened and stretched (Shelton-strong, 2017).

Although the predominant view in literature on learning styles is that profiling learning styles is beneficial due to its use when applied to course design, studies have also suggested that profiling students' learning styles benefits the student directly. Through being

aware of their learning style students are able to better select relevant learning strategies (or learning techniques as referred to in this study) (Bostrom & Lassen, 2006). By being able to select effective learning techniques, students are more likely to achieve (Cekiso, 2011). This study is in line with this latter objective – focusing on using learning styles in order to improve students' learning, not teachers' teaching. As Fleming (2001) argues; the goal of a learning styles model should not be to profile individual learning styles in order to inform teaching strategies, instead, these models should be used as a means to get students to think about how they learn. Therefore, it can be argued that the type of learning style model chosen is irrelevant; instead the importance lies in how that model is used to improve learning. Therefore, this study does not make use of a particular learning styles model, but instead, broadly makes use of the concept of learning styles during interviews with high academic achievers.

2.3.2) Learning styles and academic achievement.

Studies into the effects of learning styles on academic performance have mainly followed a quantitative design – correlating different learning styles with academic performance measures (e.g: Cano-Garcia & Hughes, 2010; Contessa, Ciardiello & Perlman, 2005; Hess & Frantz, 2014). These studies have therefore focused on profiling students' learning styles. In order to profile students' learning styles and then correlate these profiles with academic achievement scores, researchers make use of a variety of questionnaires such as Kolb's Learning Style Inventory (LSI), the Index of Learning Styles (ILS) based on the Felder-Silverman model, and the Myers-Briggs Type Indicator (MBTI). Results from these types of studies have been mixed – while some show a significant correlation between academic achievement and learning styles, others show no correlation. For example, in a study conducted by Urval et al (2014) the mean score of marks obtained in grade 10, 12 and the last University examinations of medical students were compared to VARK styles (visual,

auditory, reading/writing, and kinaesthetic). Results indicated no correlation between the academic mark and sensory modality. Due to the mixed results from various studies, researchers are unconvinced that student learning styles is an adequate measurement to use in order to predict and explain academic achievement, and some have even gone as far as to state that the idea of learning styles is a myth (Newton & Miah, 2017).

Whilst researchers are unconvinced that learning styles influence achievement, there is still belief in the general idea that individuals have a preferred learning style. Therefore, the question remains: how can the information on learning styles be used in order to benefit the students' learning outcomes? (Glonek, 2013). Studies suggest that information on learning styles can benefit students' learning outcome through exposing students to different types of learning styles (Glonek, 2013). Furthermore, studies suggest that, by being aware of their dominant style, students can identify where this dominant mode is not being used and then select alternate learning techniques (Glonek, 2013).

2.4) Conclusion

This chapter presented literature on the two concepts used as the framework for this study: SRL and Learning Styles. Studies have linked SRL and learning styles to academic performance through quantitative designs in order to establish correlations between these learning concepts and academic results. Although studies have found different outcomes depending on the samples used, there is general consensus that SRL, and awareness of one's learning style play an important role in the academic success of students. These studies, due to their quantitative approach, do not explain the dynamics of *how* high academic achievers make use of learning strategies in order to achieve, nor do they give the students an opportunity to express their views on factors influencing their learning and achievement. Therefore, a qualitative focus which makes use of concepts explicit in SRL and Learning Styles theories may give greater insight into high academic achievers learning.

Chapter 3: Methodology

3.1) Introduction

This chapter begins by stating the researcher's views on the status of reality and knowledge. Following from this is an outline of the research aim and objectives as well as an explanation of how the research questions were developed. After the researcher's view of the status of reality and knowledge has been presented, the process of data collection and data analysis are discussed. Steps taken to ensure rigour as well as the ethical consideration are presented. The limitations of this study relate to the study methodology and are thus presented in this chapter.

3.2) The Status of Reality and Knowledge

When conducting research, it is important to reflect on one's beliefs about the nature of reality, as well as on how knowledge is constructed or produced. The researcher believes that an individual's experiences and perceptions exist as realities and it is possible to gain knowledge about these realities in conversation with these individuals (i.e.: using a qualitative approach). Therefore, this study took a realist stance to data collection and analysis. The actual words spoken by the participants during the interviews were seen to convey aspects of the participants' realities, and the findings in this research serve to give voice to and reflect those realities.

However, it is also acknowledged that knowledge is constructed to some degree in the social setting of the interview. Hence, knowledge is biased through characteristics of the situation in which it is produced, therefore, the questions asked, cultural understanding, and beliefs of the researcher have an influence on the participants' responses (Kvale, 1996). Therefore the influence that the researcher's choice of wording might have had on how the participants expressed their reality was considered through the researcher's on-going process

of self-reflection. This reflection of the researcher's influence can be seen when looking at the process of how the research questions were refined and data was analysed.

3.3) Research Aim, Objectives and Questions

The overall aim of the research was to determine and understand the self-reported learning strategies and characteristics of high academic achievers that influence their ability to achieve. The research objectives as outlined in Chapter 1 are restated below:

1. To explore how high academic achievers self-regulate their academic learning, and the role this plays in high achievers' attainment of high academic achievement outcomes.

2. To explore the perceived preferred learning styles of high academic achievers, and how these preferred learning styles influence the study methods of high academic achievers.

3. To explore the learning strategies of high academic achievers and the perceived influence this has on high achievers' attainment of high academic achievement outcomes.

4. To explore factors that enable and inhibit high academic achievers' ability to self-regulate their academic learning; their ability to accommodate their learning style; and the use of their learning strategies.

3.3.1) Developing the research questions.

Qualitative inquiry is a reflective process during which the focus of the questions may be modified in order to reflect an increased understanding of the problem (Creswell, 2007). As stated by Braun and Clarke (2006) research questions may "be refined as the project progresses" (p. 85). Through the iterative and reflective process of data analysis, the research questions proposed prior to the commencement of data collection were reworked in order to better reflect the participants' views. As stated by Agee (2009), "good qualitative questions

are usually developed or refined in all stages of a reflexive and interactive inquiry journey" (p. 432). Flick (2009) noted that "reflecting on and reformulating the research questions are central points of reference for assessing the appropriateness of the decisions you take at several points" (p. 98). Therefore, although the initial research questions serve as a starting point for the research, they should also be revisited and restructured in order to provide continuous navigation and direction throughout the data analysis and data reporting processes (Agee, 2009).

In order to understand the changes made to the research questions, the original research question as stated in the research proposal are presented below. This makes it easier to see how and where changes were made.

Originally proposed questions:

1. How do high academic achievers self-regulate their academic learning, and what role does this play in high achievers' attainment of high academic achievement outcomes?

2. What are the perceived preferred learning styles of high academic achievers, and how do these preferred learning styles influence the study methods of high academic achievers?

3. What are high academic achievers' learning strategies, and what perceived influence do they have on high achievers' attainment of high academic achievement outcomes?

4. What are the factors that enable and inhibit high academic achievers' ability to self-regulate their academic learning; their ability to accommodate their learning style; and the use of their learning strategies?

Through engaging in literature on SRL, learning styles and learning strategies throughout the study, as well as by engaging in a reflective process of data collection, learning strategies was no longer viewed separately from SRL and learning styles, but was instead conceptualised as implicit in both. This is reflected in the structure of the literature review

which discussed learning strategies as cognitive, metacognitive, behavioural/management, and motivational strategies within SRL, and as learning techniques in relation to learning styles. Therefore, research question 3 as presented in the proposal is answered through discussion of the findings for research questions 1 and 2. Research question 3 as presented in the proposal was therefore deemed redundant and was thus excluded.

The decision to allocate different terminology (i.e.: learning strategies versus learning techniques) in order to differentiate between learning strategies as reflected in SRL and Learning Styles resulted in the subtle change in wording from 'study methods' to 'learning techniques' in research question 2.

When working with the data, the researcher found that research question 4 proved problematic. When reflecting on why this might be the case, the researcher realised that the research question contained hidden assumptions that she was not aware of at the time of proposing the study. Firstly it assumes that SRL is a single ability and that the participants would be able to speak about the influences on this specific ability. When engaging in further research on the topic of SRL the researcher gained a greater understanding of the fact that SRL includes a range of abilities and the use of a variety of strategies. Therefore, a more appropriate question would have addressed the enabling and inhibiting influences of specific strategies, for example: what enables and/or inhibits high academic achievers ability to effectively manage their time?

Secondly, the question assumes that the high academic achievers in this study are aware of their learning style and make an effort to accommodate this style when learning. After engaging with the data, the researcher realised that this was not the case. The participants did not speak about a general style but instead mentioned specific learning techniques.

Furthermore, research question 4 positions learning strategies as a separate topic. This was problematic due to having amalgamated learning strategies within SRL and within learning styles.

These considerations meant that research question 4 as stated in the proposal could not be answered using the data collected. However, during the interviews the participants did make reference to a few influences on their awareness and development of learning strategies, learning styles, and learning techniques. Therefore, the fourth research question underwent considerable revision in order to better reflect the participants' responses.

The revised research questions are therefore:

1. How do high academic achievers self-regulate their academic learning, and what role does this play in high achievers' attainment of high academic achievement outcomes?

2. What are the perceived preferred learning styles of high academic achievers, and how do these preferred learning styles influence the learning techniques of high academic achievers?

3. What influences high academic achievers awareness and development of learning strategies, learning styles and learning techniques?

3.4) Data Collection

3.4.1) Participant recruitment.

High academic achievers were the target group of this study. For this study, high academic achievers were defined as students of any age and discipline who were members of the Golden Key (GK) Society, and who were still studying at UKZN at the time of data collection. GK is an internationally recognised non-profit organisation which is affiliated to over 400 universities throughout Australia, Canada, India, Malaysia, New Zealand, the Bahamas, United States of America (USA), and South Africa. Students from all disciplines who are in the top 15% in terms of academic performance and who have completed at least

one year of study are invited by their University to become a member of the GK

society. Therefore, the GK society provided a useful platform through which to access high

academic achievers.

At the time of data collection this study fell under an overarching research project

entitled "The student academic exceptionality project: Equity and exceptional academic

achievement at the University of KwaZulu-Natal" which had already obtained gatekeeper's

and ethical approval to recruit and interview high achieving students from the GK society.

Appendix 1 includes a copy of the overarching study's ethical clearance certificate, and

Appendix 2 includes a copy of the gatekeeper's approval for the study.   After ethical

clearance for this study was granted by the UKZN Human and Social Sciences Research

Ethics Committee (HSSREC) (see Appendices 3 and Appendix 4), the researcher contacted

the Pietermaritzburg (PMB) and Howard campus GK Chapter advisors via email. The

Chapter advisors suggested that the best method for informing potential participants of the

study would be to contact the students directly via email. The Chapter advisors sent a list of

GK members to the researcher. The researcher then emailed all 80 students inviting them to

be part of the study. The email invitation to participate (see Appendix 5) included a general

introduction to the research topic as well as the overall aim of the study. Attached to the

email was the information and consent form (Appendix 6) detailing participant involvement,

as well as measures that would be taken to ensure anonymity.

Only three students responded to the email invitation. Due to this low response rate,

the researcher embarked on participant recruitment through speaking to peers in her academic

network who were members of the GK society. Three participants were sampled via this

word of mouth method. Therefore, a total of six participants were interviewed – five of whom

were studying at the Pietermaritzburg campus, and one at the Durban (Howard College)

campus. The number of participants was determined by both practical and methodological

concerns. Due to the in-depth interview approach being used, the researcher had to be cognisant of how much material could realistically be handled within the scope of a master's dissertation. Furthermore, the researcher had to be cognisant of her level of skills and expertise, remembering that this was her first attempt at qualitative research in general and at interviewing more specifically. Methodologically, after six interviews were conducted, theoretical saturation was deemed to be achieved (Flick, 2002). This meant that new interviews did not bring any new information with them that was pertinent to the aim of the research and answering the research questions. The final interview confirmed this saturation.

3.4.2) Participant description.

The students who participated in this study are referred to as participants or students. The participants were given pseudonyms in order to protect their identities. A summary of each participant is given below.

Darika: At the time of participation, Darika, an Indian female student whose home language was English, was twenty-two years old. After completing her matric, Darika went directly to UKZN to pursue an undergraduate degree. After finishing this degree she went directly into an Honours degree in a Social Science field at UKZN. Thereafter she went straight into a Master's degree in a Social Science field. At the time of data collection she was in her first year of this degree.

Malar: At the time of data collection Malar, also an Indian female student with home-language English, was twenty-five years old. After matriculating she studied a Bachelor of Arts (BA) and then went directly into Honours in a Social Science field. Thereafter, she studied a post-graduate degree and then registered for a Master's degree in a Social Science field. During this time she had a job in administration in her field of interest. She then changed degrees within the same field. At the time of data collection she was in her first year of this master's degree.

Nandi: At the time of the interview Nandi, a black female student, was twenty-three years old. Nandi started an undergraduate degree in the Arts and Culture field after leaving high school, at UKZN. She then went on to study an honour's degree and began her master's degree the following year. At the time of data collection she was in her second year of this master's degree at the Pietermaritzburg campus.

Amy: At the time of data collection Amy, a white female student, was twenty years old. Amy was the youngest participant interviewed. Amy started her undergraduate degree in the Environmental Sciences field after having completed high school. She was in her second year of this degree at the time of data collection. English was Amy's second language with German being her home language.

Madu: At the time of data collection Madu, a black male was twenty-eight, making him the oldest participant. Unlike the other participants, Madu did not grow up in South Africa. Madu grew up in another African country and only moved to South Africa later in life. After high school, Madu began studying to be a religious leader before moving to South Africa to pursue an undergraduate degree. He then went on to study his honour's and his master's degree, also in South Africa. At the time of data collection Madu was in his first year of his doctoral degree.

Paul: At the time of data collection Paul, a white male student was twenty-seven years old. After completing Matric he went to study an undergraduate degree in the Building and Construction field at a university outside of KwaZulu-Natal. Half way through his first year he deregistered from this degree and went to work for a construction company. The following year he registered for a BSc in the Construction Science field at the same university. Half way through his second year of this degree he was deregistered due to poor performance. For the remainder of that year he worked in a restaurant as a waitron and then in the following year he began his undergraduate degree in the Built Environment and

Development Studies field in at UKZN. Paul completed that degree Cum Laude and then went to gain work experience for a year outside of KZN. He then returned to do his master's degree. Paul was in his second year of this master's degree at the time of data collection.

3.4.3) The interview process.

Once participants had expressed interest in participating, a meeting time and place was scheduled via email in order for the interview to be conducted. Five interviews were conducted on the Pietermaritzburg campus grounds. One interview was conducted at a coffee shop in Durban (this was more convenient for the participant than meeting at the Howard College campus). All interviews were conducted in English.

Before beginning recording, the participant was again given the informed consent form with information about the study as well as their role and rights as a participant. This was the same form that had been emailed to them previously. Emailing the form prior to the meeting allowed the participant to be orientated to the study goals before hand and gave the participant time to consider their involvement. At the start of the interview, participants were specifically informed of their rights to participate and to withdraw from the study at any point. They were told that the information gained from the interview would be used in a master's dissertation but that they would remain anonymous. If they agreed to this, they were then asked to sign the consent form. They were also asked to give their consent to the audio recording. All participants agreed to participation as well as audio recording. Once informed consent was given, the semi-structured interview commenced, starting with a few demographic questions then moving on to questions regarding SRL strategies, perceptions of learning styles, and use of study techniques.

The semi-structured nature of the interviews allowed the researcher to be prepared ahead of time, thus maximising time with the participant (Newton, 2010). It also allowed the researcher to ask specific questions planned prior to the interview in order to guide and direct

the conversation so as to ensure the research questions could be answered. However, semi-structured interviews also allow for a level of flexibility, therefore, the researcher and participants were able to introduce participant specific topics of conversation into the interviews where relevant (Newton, 2010). Participants were given the freedom to express their views in their own terms, thus allowing rich data to be produced (Newton, 2010).

The interview guide (see Appendix 7) consisted of four sections: the first addressed student demographics; the second addressed participants' perceptions of their own SRL; the third addressed their perceptions and use of learning styles; and the final section encouraged discussion on learning strategies. This final section also encouraged discussion of what influences the development and use of learning strategies. The questions developed in the interview guide were informed by literature on SRL and Learning Styles. Although the topics to be discussed in the interviews were decided upon in advance, the order and wording of questioning varied as a result of the dynamics between the researcher and participant (Kvale, 2006). Furthermore, due to the flexible nature of semi-structured interviews, the researcher did not only focus on the prepared questions, but also questioned based on the participant's responses.

3.5)   Data Analysis

Data was analysed using thematic analysis in order to develop themes from the data. Thematic analysis offers "a more accessible form of analysis, particularly for those early in a qualitative research career" (Braun & Clarke, 2006, p. 81) and thus suited the researcher's level of expertise. This study sought to uncover the participants' reality of learning through the exploration of their subjective experiences, understandings and perceptions. Therefore, thematic analysis was deemed appropriate in order to explore the individual experiences of participants and the meanings they attribute to them (Fielden, Sillence, & Little, 2011). Of interest then was what the participants said when speaking about their learning, therefore, the

actual words spoken were the focus of the analysis. Consequently, this study took a semantic thematic approach in order to reflect explicit content in the data. As stated by Braun and Clarke (2006), the themes were identified from the "explicit or surface meanings of the data" (p. 84) as opposed to at the latent level.

Thematic analysis can either be inductive, deductive (theory-driven), or both. In this study theoretical concepts were used to inform the research questions and thus the construction of the interview schedule. Therefore, the study was deductive in that the researcher's prior knowledge of the theory framed the research objectives, questions and analysis. Although the theoretical framework influenced the naming of some of the codes and themes, the codes and themes were not restricted to those that could be matched to theory, and the researcher allowed expression of themes that were not theory driven. Therefore, the researcher did not apply a purely deductive approach to data analysis but also engaged in an inductive process.

3.5.1) Transcribing the data.

The material that was analysed consisted of transcripts of the interviews as well as field notes taken just after the interviews had ended. The researcher acknowledges that there is not one 'correct' way of transcribing data; instead, transcription is a selective process that must reflect the research goals (Davidson, 2009). Prior to beginning transcription, the researcher wrote down initial thoughts and ideas. This is considered an essential step in analysis (Riessman, 1993). Once the researcher had written down her thoughts relating to the interviews, the process of transcription commenced.

The data in this study underwent two processes of transcription. At first, the interviews were transcribed verbatim using the Jefferson transcription notation (1984), however, upon reflection, the researcher felt that by incorporating many transcription notations the Jefferson transcription system detracted from the actual words. Therefore,

considering the semantic focus of this study, the researcher re-transcribed the interviews using the Intelligent Verbatim method of transcription.

Intelligent Verbatim intends to capture the meanings and perceptions created and shared during the interview through accurately capturing the substance of the interview. It is used in order to create a reader-friendly transcript by allowing for fillers and repetitions to be edited so that the reader is not distracted from getting at the content of the interview. The level of editing applied when transcribing depends on the aim of the research. In this case, the researcher only omitted fillers, repeated words if redundant, and nonverbal communication. The researcher also did not represent overlapped speech between the researcher and participant when that speech did not interrupt the participant's response. The researcher did not make any grammatical changes and punctuation was used in order to reflect the way in which the words were spoken as well as the participants tone.

The goal was to create a readable transcript while staying true to the voice and intended meaning of the participants. In order to ensure that the words as well as the intention of the words were accurately recorded, the researcher continually checked the tape-recorded material during transcription, as well as after transcription in order to compare the transcript with the voice-recording (Fielden et al., 2011).

3.5.2) Generating codes and themes.

In order to conduct a thematic analysis, various steps and processes were followed. Firstly, the researcher printed each transcript. The researcher then read and re-read each of the transcripts several times. This process of repeated reading, as well as having gone through two transcription processes, resulted in data emersion – ensuring the researcher's closeness with the data (Braun & Clarke, 2006).

Once the researcher had read the transcripts a number of times, and began to be immersed in the data, the researcher began coding segments of the transcripts. Segments or

portions of each transcript were coded, instead of line by line coding or page coding. The codes were written alongside relevant segments on the printed documents. The code names reflected the participants own words in some cases (for example: "unsure of degree choice"), and concept from the SRL and Learning Styles theory in others (for example: "time management"). An excel spread-sheet was then created in which the various codes for each transcript were listed under the relevant participant's name. Once all the codes were represented in the spread-sheet, the researcher printed this spread-sheet and used a highlighter in order to group similar codes. These groupings were used to develop themes.

After some time, the researcher again analysed the transcripts. This time, the transcripts were imported into Excel. Segmented coding was again used and codes were typed in alongside meaningful sections of the transcripts. Meaningful segments were those that related to the research questions and to the overall aim of the study. The codes were then copied and pasted into a new Excel page, and colour coded according to participant. This list of codes was then printed, and the codes were cut out and physically grouped by the researcher. Codes that spoke to similar ideas or concepts were grouped together. Groups consisting of a number of codes were developed into themes.

The themes developed using the first method of analysis were compared with the themes developed using the second method of analysis. The themes developed were similar when compared; however, upon reflection, during the first analysis the researcher realised she had developed themes according to what she wanted to present instead of developing themes that reflect what the participants said in relation to answering the research questions. Therefore, the researcher decided to report on the themes developed during the second analysis. In order to further understand and develop these themes, the researcher made use of thematic maps (Braun & Clarke, 2006). Any themes that did not have enough data to support them were either reworked into other themes or discarded. During this process, the researcher

was cognisant of ensuring that the themes reflected the patterns in the coded data and also reflected what was evident in the data set as a whole (Braun & Clarke, 2006).

Once the thematic maps had been developed, the themes were defined and named. The naming of main themes was influenced by terminology present in theory. Sub-theme names were influenced both by theory as well as by the participants' words in order to convey the essence of the theme. Once the themes were developed, they were inserted into an Excel spread-sheet. Relevant extracts from the transcripts were chosen in order to illustrate elements of the themes. These were inserted into the spread-sheet cells under each relevant theme name.

Although data analysis was influenced by the research questions, the research questions themselves were also refined through a reflective iterative data analysis process as explained in 3.3.1. In the end, the themes were developed to answer three main questions. Main themes represent the topics in the three research questions. Sub-themes further explain these main themes.

3.6) Study Rigour

3.6.1) Credibility.

In order for a study to be credible the findings must be congruent with the reality and phenomena being studied (Merriman, 1998). In this study credibility was achieved through the use of four strategies. Firstly, the researcher encouraged the participants to be open and truthful in their interviews by reassuring them of their anonymity and creating a safe space (Curry & Nunez-Smith, 2015). A second technique used was participant confirmation where the researcher went back to the participants to check whether the findings were consisted with their experiences and perceptions (Curry & Nunez-Smith, 2015). She also made use of peer debriefing during which she asked several peers outside of the study questions about this study in order to ensure that it can be understood by others (Creswell, 2009). The fourth

technique used was reflective commentary. This formed a major part of the data analysis process. The researcher engaged in critical reflection throughout the study (Silverman & Marvasti, 2008), and continually reflectively evaluated the project as it developed (Lincoln & Guba, 1985).

3.6.2) Dependability.

In order to enhance dependability, detailed description of the process of the study is given in this methodology chapter, including details of data gathering tools used such as field notes and methods used to record the data (Silverman & Marvasti, 2008). Data extracted from the interview transcripts and analysed thematically is saved for a minimum of five years both by the researcher and the researcher's supervisor, therefore providing other researchers with the opportunity to make use of the data collected or to replicate the study.

3.6.3) Rigour.

A rigorous study is one that applies the appropriate tools to meet the objective of the study (Long & Johnson, 2000). In this study a qualitative approach is used in order to gain an understanding of high achievers' learning and the factors they perceive as influential with regard to their academic achievement. This establishment of an in-depth understanding is facilitated by the use of semi-structured interviews which allow for openness and flexibility, yet still providing structure in order for comparisons and similarities to be made between interviews. In order to establish such comparisons and similarities, this study made use of semantic thematic analysis.

3.7) Ethical Considerations

Throughout the study and in reporting thereof, the participants remained anonymous. Their identity is protected through the use of pseudonyms and any self-identifying information presented in the interview extracts is replaced with more general terminology as indicated by the use of square brackets. Not only were their names and identities concealed,

but their personal contact information was kept confidential. Only the researcher and the research supervisor had access to the participants' information and this was not used without their consent. Before participating in the study, the participants were emailed adequate information regarding the study as well as the consent form. A venue that suited the participant was chosen and before commencing the one-on-one interviews the participants were again informed of the study objectives as well as their role in the study. They were also informed of their rights to withdraw from the study at any point. They were then asked to sign the consent form allowing the interview to take place and acknowledging their role and rights. Participants did not receive any form of remuneration or reward for participating and therefore did so willingly. The participants were also asked to sign an audio-recording consent form.

The participants were informed that they would have access to the study once the study had been completed and were told that, should they want additional feedback, they could contact the researcher. Throughout the study the participants were treated with respect and their dignity was upheld.

This was a low-risk study, and although there were no direct benefits for participating, it was hoped that the act of discussing one's learning would be a beneficial experience for the participants as it acts as a means of evaluating and reflecting on one's learning (a critical component of SRL). The findings from the project also have the potential to benefit the learning of all students.

3.8) Study Limitations

Upon reflection the researcher identified three study limitations – one relating to the effects of lack of prior detailed theoretical knowledge on the development of the research objectives and questions; one relating to the development of the interview schedule; and one relating to the sampling of majority postgraduate students.

As the study progressed the researcher reflected on the effects that her lack of prior detailed theoretical knowledge of the fields of SRL and Learning Styles had on the formation of the research objectives and proposed questions. The fact that the researcher only had a surface and practical level knowledge of SRL and Learning Styles at the time of proposal writing meant that the research objectives were not well refined. This led to the development of a broad range of objectives covering a variety of concepts and topics. Having to answer the research questions and address the objectives within the expected length of a master's dissertation meant that certain topics were not able to be presented and discussed in as much depth as could have been achieved if fewer, focused objectives had been developed.

The second limitation pertains to the questions formulated in the interview schedule. Upon reflection, these questions were perhaps too prescriptive resulting from the researcher's lack of experience in qualitative research. The wording of the questions may have influenced the participants' choice of words when discussing a particular issue or topic. The researcher had to be cognisant of this when conducting data analysis and interpretation.

The third limitation pertains to the sampling of majority postgraduate students. It is acknowledged that postgraduate students may not be representative of majority of the students at UKZN due to their privileged position of being able to undertake postgraduate courses. However, although the postgraduate participants may not be representative of the student population at UKZN, their mature and successful (in that they were accepted into postgraduate courses) position allows them to be able to critically reflect on their years at university and evaluate their success. It could be argued that postgraduate students are good examples of high academic achievers and are role models for students entering university.

3.9) Conclusion

In this chapter the study methodology was presented, detailing the researcher's view of reality and knowledge creation, restating the research aim and objectives, providing and

explanation of the development of the research questions, and detailing the data collection and data analysis processes. The steps taken to ensure credibility, dependability and rigour were presented along with the study's ethical considerations. Finally, the study limitations were stated.

Chapter 4: Findings

4.1) Introduction

During the semi-structured interviews participants were asked questions pertaining to their SRL strategies as well as their learning styles. For example, students were asked how they stay motivated, whether they have any goals, and to explain their learning style. What was particularly interesting was to begin to understand how SRL takes place in practice in the everyday lives of these students, as well as how these participants viewed their learning styles and the impact it had on their use of study techniques.

In order to best portray the findings, a thematic map is presented for each topic – SRL strategies; self-perceived learning styles; and influences on the awareness and development of learning strategies, learning styles, and learning techniques. These topics relate to research question 1, 2 and 3 respectively. Included in the thematic maps are themes and sub-themes used to explain aspects of the broad topic that were most pertinent to the participants.

This chapter will begin by presenting the themes and sub-themes related to SRL, followed by the sub-theme related to self-perceived learning styles. The influences on the participants' awareness and development of learning strategies, learning styles and learning techniques are then presented. Finally, Section 4.5 concludes the findings.

4.2) Self-Regulated Learning Strategies

The interview schedule was informed by concepts inherent in SRL theory, specifically focusing on SRL strategies. This allowed the participants to discuss the various SRL strategies they thought they used, and those they felt most influenced their ability to achieve. From the analysis of the interviews, three main themes were developed, namely: being motivated; effective time management; and proactive approach to learning. Each of these main themes is further explained by the use of sub-themes as can be seen in the thematic map below (Figure 4.1).
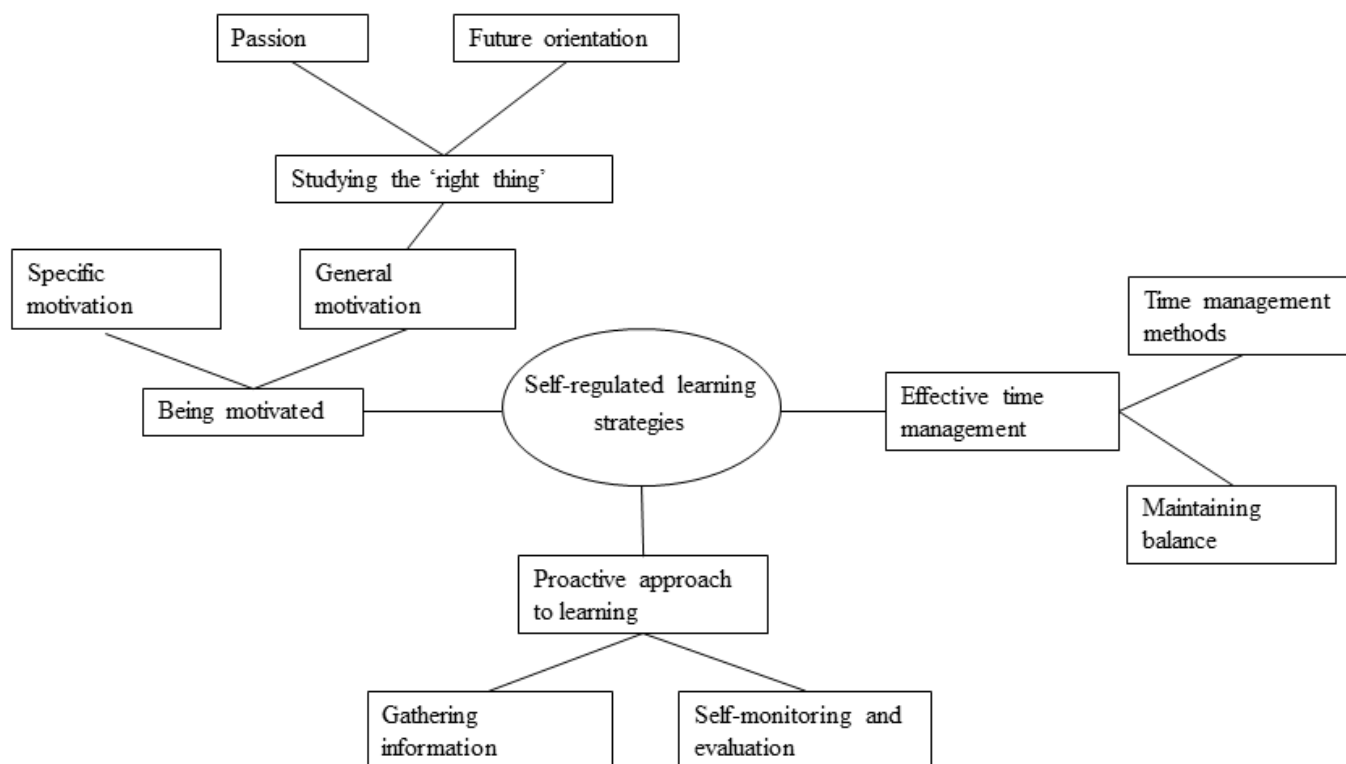
Figure 4.1: Thematic map of the participants' self-reported self-regulated learning strategies

This thematic map illustrates key SRL themes, as well as how these themes are connected. During the interviews all the participants indicated that they are motivated. Therefore, the researcher developed the theme 'being motivated' (see top left quadrant of Figure 4.1) to capture both the fact that the participants mention motivation as an important element that enhances the ability to achieve, as well as to capture the various types or sources of motivation. As a result, the theme 'being motivated' included two sub-themes which relate directly to the sources of motivation. These sub-themes were 'specific motivation' and 'general motivation'. When speaking about motivation the participants mentioned the benefit of studying the 'right thing'. Of particular importance to the participants was the role of interest (passion) and future goals (future orientation), and the effects these had on course choice which in turn influenced their general motivation.

When discussing time management (see the right side of Figure 4.1), not only did the participants discuss the methods that they used in order to manage their time, but they also discussed the importance of creating a balance in their lives. Therefore, the label of 'effective time management' was developed and is explained using the sub-themes 'time management methods' and 'maintaining balance'.

Through the interviews with the participants, it became evident that the participants were proactive; therefore, the theme 'proactive approach to learning' (see bottom half of Figure 4.1) was developed in order to illustrate the fact that the participants are active participants in their own learning. In order to further explain their proactive approach to learning, the sub-themes 'gathering information' and 'self-monitoring and evaluation' were developed.

Further explanation of the findings relating to each theme and sub-theme are presented throughout the remainder of this chapter.

4.2.1) Being motivated.

It became clear from the participants' responses that they strongly believed being motivated enhances the ability to achieve. Paul highlighted the importance of motivation when he stated:

It's not a case of trying to help people who are struggling academically; I think it's a case of getting people into a space that they can be motivated, so whether it's having motivational sessions, whether it's getting outside people in to come and speak about what lies beyond the varsity career wise, if that's some sort of motivation, but I think it would be – if people are locked into a course and they need to get through, and they're struggling, it's not because they're academically inferior. They wouldn't get into the course if they weren't strong enough academically. It's a case of trying to find motivation and that dedication.

From the extract above, Paul implies that students who underachieve are not underachieving due to a lack of academic ability (they are not "academically inferior"), but perhaps are underachieving due to a lack of motivation. Therefore, being motivated has a great impact on a student's academic performance. This belief that students underachieve due to a lack of motivation is reiterated by Darika who stated: "intelligent students under achieve, maybe they don't have the motivation".

The participants did not only state that being motivated influences their ability to achieve academically, but they also described their sources of motivation. When speaking about motivation, they explained what motivated them to complete specific tasks, as well as what kept them motivated in general. Therefore, the researcher classified the various sources of motivation into those that are task specific (specific motivation) and those that are general (general motivation). The sources of both specific and general motivation as mentioned by the participants are represented in Table 4.1.

Table 4.1

Participants' Self-Reported Sources of Specific and General Motivation

Sources of specific motivation	Sources of general motivation
Deadlines	Previous effort
Self-initiated rewards and punishments	Competitive nature
Making a commitment	Intrinsic value
Marks	Parents paying for fees
Stress	First in class
Guilt	Studying the 'right thing'
Task interest	Passion
	Future goals: independence and travel
	Awards
	Maintaining a scholarship
	Envisioning a career

4.2.1.1) Specific motivation.

In order to complete specific tasks such as studying for a test or writing an assignment, participants mentioned a number of sources of motivation. Darika completes tasks due to high levels of stress stating: "I'm also quite a high stressor, so I would feel panicky, it's not a good thing but I get anxious and panicky and then I would want to just wake up and study". She is also motivated by marks indicating that "I don't like seeing anything below 70, so I guess I work to that". Marks was also a source of motivation for Mala who said: "I hope for seventy percent in my mind", and Amy who stated: "I always used to monitor my marks so that's what motivated me to actually sit down and learn stuff, so I always have a sheet somewhere with my marks".

Nandi stated that she sometimes procrastinates and then feels guilty about not working. This guilt then motivates her to work. She noted: "It's very hard to get to a point where you are at the desk and you sit down and you're studying, and sometimes it takes procrastination to feel guilty and then you work out of guilt." Nandi was also motivated through making commitments stating "sometimes it takes making a commitment to meet up with someone", and by deadlines: "approaching the deadline also motivates you to go sit down and study."

Nandi and Amy stated that they make use of a system of rewards and punishments in order to motivate themselves to study. In other words, they incentivise themselves to work. Nandi stated: "I treat myself…there are certain things I can do only once I've covered a certain section…so it's either I punish or reward myself". Amy stated: "I've learnt to motivate myself; I work with like a point system where I say okay, if I finish this section, I'm allowed to make one card… or I tell myself I can go eat a Lunch Bar or something."

The participants' responses indicate that there is not only one specific method or source of motivation adopted by them all. Therefore, there does not seem to be a single

source of motivation that suits all participants. Instead, it is important for the participant to know their source of motivation, to choose a source of motivation that works for them, and to ensure they stay motivated in order to complete a task.

4.2.1.2) General motivation.

From the conversations with the participants it was evident that the participants were not only motivated to complete specific tasks, but they were also motivated to do well in their course and degree in general. The participants mentioned a number of motivating sources that enabled them to remain motivated throughout the course. For some of the participants a personal desire to participate in learning is what motivated them. These participants find intrinsic value in their studies and report that studying is fulfilling in its own right. For example, Mala stated: "studying is one of the most fulfilling things in my life, and it makes me feel like I have something that I can work towards." Similarly, Madu stated:

> Studying for me is like a journey into the mind. When you are travelling you are
> going somewhere, everything is amazing. You see the visuals and scenery –
> everything is so amazing. For me that is how I look at studying – as a journey. You
> learn something you've never heard before so that is this urge to learn and to discover
> new things every day, is what motivates me to study.

Mala was also motivated by the fact that she had previously had to work for many years to get to master's level. She stated: "I really have always wanted to do this degree and I think because it took me so long to get accepted for this degree, that's why I have so much intrinsic motivation". For Mala, the amount of previous effort applied motivated her to work hard in her current degree.

Amy was motivated by her parents having paid her study fees; by maintaining a scholarship; and by the knowledge that she might receive an award. She stated:

> The fact that I know that my parents are paying for my studies and that if I do well I might be able to get a refund or whatever that word is for [remission] remission, yes, because I know that I got a scholarship when I went from high school into university… and I kind of hope that I would be able to keep my marks high enough for me to keep that. I think the fact that I know that I'm getting good marks and that pushes me, to know that I might get an achievement or an award.

Paul was motivated by his competitive nature and his goal to come first in class. Therefore, unlike Mala and Darika who stated that they just try to do their best, Paul compares his marks to his peers. He stated:

> It becomes easier to have a goal where you are being competitive with your peers and classmates, so my academic goal, yes, was to try and Cum undergrad, but it was far easier to measure myself against my classmates and peers and say my academic goal was to come first in class. Whether coming first meant I got 60% or 80% didn't really matter too much to be because [As long as you came first] Yes, just because the scale of how they measure is so subjective, then you know okay, well, maybe 80 isn't a benchmark, you just know how to benchmark yourself against your peers.

As with the sources of specific motivation, there does not seem to be only one source of general motivation common to all participants. Instead, each participant has his or her own source of motivation that keeps them motivated and driven. However, two sources of general motivation that were common amongst all the participants were interest in the course (passion), and seeing the course as a means to achieve future goals (future orientation). This passion and future orientation linked to studying the 'right thing'.

4.2.1.2.1) Studying the 'right thing'.

All of the participants either explicitly stated or implied that performance/achievement is influenced by course choice. As Mala stated: "I've studied the

right thing, and I think that's why I've succeeded in it… because studying the right thing, as I've mentioned, is huge…" By studying the 'right thing' the participants are referring to studying a course that suits their strengths, and that they are passionate about. It must also be a course in which they can see a future – in other words, the course must provide them with a foundation to establish a successful career. By being able to choose a course that they are passionate about and in which they foresee a career, the participants become more motivated.

Although each participant mentioned different sources of motivation, all the participants emphasised the importance of being interested in or passionate about a selected course. Paul was particularly vocal about the importance of being passionate about a course. Paul started out studying a degree in the building and construction field, but then changed to another degree in a similar field after a year due to a lack of interest. He then changed his degree again two years later due to poor performance in the second degree. Paul attributes much of his poor performance in his prior course to a lack of passion, and likewise attributes much of his success in his current degree to his passion for the subject.

Paul stated:

> The fact that I didn't enjoy it as much [his first and second degree choices] so I think the fact that I am intrigued by what I study now, means that watching YouTube videos on [current course content], for example, I find interesting and I would often find myself watching more – or watching something that covers things beyond the scope of what we're learning, just because I'm interested in it, whereas – and that's what I think it actually boils down to; if you're not passionate about what you're doing, it then becomes work, and work is hard to do, it's hard to motivate yourself. Whereas if you're passionate about it, work just becomes fun, it's a hobby, it's no longer a negative stress on you, it's a positive stress and you don't feel like you've actually done work at the end of the day.

From the extract above Paul suggests that being passionate about his current chosen course motivated him to not only do the required work, but also to go above and beyond – doing extra 'work' (this idea is further supported under the sub-theme 'gathering information' presented in 4.2.3.1). The term "work" is presented in inverted commas because Paul stated that, by being passionate about his course, it no longer feels as though he is working, instead it "becomes fun". This implies that he feels as though the term 'work' has a negative connotation – it is something he does not enjoy doing; but passion helps to change his view of 'work' into something more positive.

The importance of being passionate is further emphasised by Nandi who stated:

> I could have easily done Geography and Biology, I did quite well in those subjects and I did enjoy them and yeah and I had an interest in them but wasn't excited, I didn't have any passion for it, it was okay in high school cause I was still trying to find myself and I had a lot of questions but by the time I did musicals I felt the passion that I had for drama, I knew doing anything else would have been quite mundane.

This extract from Nandi demonstrates a difference between being interested in a course and being passionate about a course. She implies that interest is not sufficient; instead passion is what dictated her course choice. This idea of 'passion' as mentioned by Paul and Nandi implies a strong emotional response to the course content. As Paul stated, the course "becomes fun" and is "no longer a negative stress". Nandi implies that her course excites her. The importance of a course evoking a positive feeling was also echoed in the other participants' responses. For example, Madu stated: "I wanted to do something that I felt would make me happy".

The impact of studying something that is interesting and therefore motivating is summarised by Mala who stated:

> I think what you're studying makes a difference rather than how you are studying, because I think if you're motivated by what you're reading and it's interesting to you and you can engage with it, then it's great…I think that for me it's what I'm studying that makes it great, I think that if I had to do accountancy or something, I would find it very difficult, it would be a burden for me.

Mala specifically states that she feels *what* a person studies has a greater impact on performance than *how* a person studies. According to Mala, as well as the other participants, being passionate (and thus motivated) makes the task of learning and studying easier.

A key source of motivation that enabled all of the participants to stay motivated throughout their degree was the fact that they are future orientated. This means that they are motivated to achieve beyond university. Not only do they have goals that enable them to work well and achieve good marks in their course, but they have long term goals and visions. For Mala, these future goals were made concrete through the use of a vision board. She stated:

> When I first finished my degree in 2010 I drew vision boards for myself and it has quite basic stuff on it like a car and a house and different motivational things are on it to say that these are the things that I want to achieve in my life, and I have another poster that says by the time I'm 30 this is what I need to achieve.

The participants mentioned a number of future goals such as independence, happiness, having a successful career, and being able to travel. What was particularly important to the participants was that their current course choice enabled them to one day achieve these future goals. They therefore were aware of their future goals (i.e.: were future-orientated) and were motivated by the fact that their course would put them on the path to achieving these goals. Therefore, the participants came across as forward-thinkers. They made decisions based on future goals and visions. For example, Mala did not get accepted into the master's

programme she was undertaking at the time of data collection the first time she applied, so she decided to do another course which she knew would help her obtain entry into the master's degree program at a later stage. She stated:

> I didn't get accepted, and then - a pre-requisite to doing [my current course] is to do [another course] so I decided to do that and complete that aspect of the [current course] so that it would give me more chance of getting into the program at a later stage and also to guarantee that I would have a profession.

The participants were not only motivated by the fact that the course they selected was interesting and brought them happiness and enjoyment, but were also motivated by knowing that their course would lead to a career which would make them happy and allow them to achieve their goals of success, travel, and independence. Nandi emphasised the importance of seeing a future in the chosen course when she stated:

> I thought I have some gift in this (current course) and I can really make a career out of it so it's not just a fun hobby because we can all have fun hobbies but I can also make a solid career out of it.

Later in the interview she makes the link between seeing a future in the course and motivation apparent by stating: "If you see a future in what you are studying I think that motivates you greatly." This link is also made explicit by Amy who stated: "I think it's actually another motivation point, the fact that you actually see okay, I will need this in the future."

Being motivated was something that the participants stated was an important factor affecting their ability to achieve. The participants were all aware of what motivated them, both to complete specific tasks, as well as in general in order to achieve high results throughout a course. The participants imply that it is easier to maintain motivation in the

'right course' – i.e.: in a course that they are passionate about and that they see a future career in.

4.2.2) Effective time management.

Another strategy that the participants stated is crucial to their success is time management. When asked how they go about their learning, or how they take control of their learning, all of the participants immediately responded by stating the importance of time management. This was summarised in a single sentence by Amy when she said: "I think one of the biggest things is time management."

Through the use of a qualitative approach, this study was able to explore time management in greater detail. Not only was it evident that being able to effectively manage time was important, but the responses allowed greater explanation of *how* the participants managed their time. Although the participants all emphasised the importance of time management, the actual methods used to manage time differed according to the individual. These various methods employed are discussed under the sub-theme 'time management methods'.

4.2.2.1) Time management methods.

In order to plan their time, the participants made use of their course outlines. From these outlines they made a note of the important dates (i.e.: the dates that work was due). As Nandi stated: "at the beginning of each semester I like to really study my course outline and monitor the peak times…and then I can start scheduling from the beginning". Once the participants had an overall idea of when work was due, they began to plan their time in more detail. Darika, Mala and Nandi stated that they plan their time on a weekly basis. Nandi stated: "I'll have an overall semester or term view of what's coming up but usually I look at what I need to do weekly". Mala stated that she takes a few minutes on a Sunday evening "to just look at what I need to do" and then she will "say from Monday to Wednesday I'm going

to do this and from Thursday Friday I'm going to do that". Darika stated: "I will sit at the beginning of the week and I will see, do I need to be somewhere on this day or that day, and then I will sit down and say okay this day I will be doing this, this day I will be focusing on this."

Participants made use of different materials in order to plan their time. Darika stated: "I always just have everything in my diary". In contrast to Darika who only makes use of a diary because she "finds it too scattered…to have everything everywhere", Mala makes use of a variety of materials in order to plan and manage her time. She has a work flow of weekly tasks on her wall at home and also makes use of lists. She stated that she "basically (has) calendars and notes to say what needs to be done". This idea of a wall calendar was also used by Paul. Interestingly, Madu does not use any materials in order to keep track of his time planning, instead he stated: "it's in my head, it's nothing documented".

Although each respondent makes use of a different method of planning their time, most of the participants mentioned the importance of working consistently and starting tasks as soon as they are assigned. Nandi stated: "I've learnt that you don't start managing your time during exams, you start managing your time before exams." Paul stated: "I learnt very much, start dealing with things as you get them, don't park them off no matter how small it is.".

4.2.2.2) *Maintaining balance.*

The participants that were in a master's or doctoral degree program at the time of data collection spoke about the importance of maintaining balance. Balance refers to ensuring time is spent on fulfilling different needs such as staying healthy, spiritual fulfilment, socialising, and studying. Therefore, the participants used time management in order to ensure that all aspects of their lives were fulfilled.

The realisation of the need to maintain balance was expressed by Darika when saying: "I realised that life is not only about the books, you also need to set aside time for your friends, family and for yourself." This need to maintain balance was also expressed by Mala who stated: "I try to work for a period of time during the day and then in the evening I try to take time to relax so I try to keep that balance." Madu stated: "I receive high grades because my body is fit, I like the exercise, I enjoy my academic life because I have a very active social life." He also said: "I consciously decided that I was going to lead a very very balanced life" and went on to say: "I would make sure, you know, I was balanced in my social life, I was balanced in my independent reading, and I was balanced in my school work as well." The words "I try" used by Mala and the words "I consciously decided" used by Madu imply that maintaining a balance is not necessarily an easy task; instead, it takes effort on the part of the student. This links to the main theme 'proactive approach to learning' which is spoken about in the following section. The participants are proactive about their use of time, consciously deciding how their time is spent and making an effort to adhere to their time planning. The participants stated that adhering to their time plan requires discipline. This demonstrates that they are actively involved on a daily basis in ensuring efficient use of their time.

In order to maintain the correct balance, it is important to be aware of what needs the most time and/or attention. Paul best explains this when stating:

Realising when you are spending too much time on something or not enough time on something – I think a lot of people see time management as, okay I need to spend five hours a day working. I learnt very quickly that yes, I need to spend so many hours a day working, but know you are spending that time on the right things.

The extract above from Paul implies that it is not only important to allocate 'study time' but the student must be aware of how to manage their time within that allocated time slot. They

therefore need to prioritise different work tasks and topics in order to make sure they are making efficient use of their time.

As mentioned by Madu, it is important for a university student to remember that first and foremost, they are a student; therefore, their academic requirements should take priority. Madu stated: "you have to remember first of all what brought you to varsity is education so primarily you are a student".

4.2.3) Proactive approach to learning.

It was clear that the participants in this study had a proactive approach to their learning. This idea of being actively involved in one's own learning is best expressed by Nandi who stated:

> It also takes a lot of initiative so you have to take charge of your studies, it's very easy to go to campus every day and come back with very little knowledge. You have to really, really be willing and go in there with a focused approach.

This extract demonstrates that the participants acknowledged their active role in their own learning and did not see themselves as passive recipients of knowledge. This awareness of their active role was demonstrated by their active pursuit of information and their active self-monitoring and evaluation

4.2.3.1) Gathering information.

During discussion with the participants it became clear that they do not allow themselves to continue without sufficient understanding of a topic covered in their course. Paul stated that he "will go query it and question it if I don't understand", "I never ever would carry on without understanding or trying to understand". In order to ensure sufficient understanding, the participants actively gathered information and sought assistance by consulting Google, asking the lecturer for clarity, or engaging in discussion with peers and attending study groups.

What was evident from the participants' responses was that they do not merely ask friends or the lecturer for more information without first engaging with the information themselves. In other words, they do not ask others to do the work for them. Mala stated: "I try and figure it out myself but if I'm really stuck and I'm like this is not getting me anywhere, then I would go ask the lecturer." Amy stated:

I go home and see if I can't figure it out on my own, if I can't figure it out then I try

asking friends or somebody who has done [it] before me, if they can't help me then I

generally just send the lecturer an email saying can you please explain this to me.

These extracts from Mala and Amy demonstrate their willingness to apply themselves and to put effort into their work instead of viewing learning as a passive experience.

Not only do the participants state that they make the effort to understand their course work, but they also go above and beyond in order to gain additional knowledge. For example, Nandi stated that she does extra reading in order to better understand a topic, "even if it's just one chapter or another reference or another example, it kind of broadens your understanding of whatever it is that is being studied".

Some of the participants noted that being able to do extra work may enable achievement regardless of the quality of teaching. Darika stated: "I've had bad teachers, but then you just go and do extra work yourself. So if you're motivated like that, you could make a success of yourself." This final sentence implies that being able to go above and beyond requires motivation. This idea is supported by Paul. As mentioned in Paul's extract above in 4.2.1.2.1, Paul watches YouTube videos covering content beyond the scope of what they are expected to study. He does this because he is interested in the content and is thus motivated to gain additional knowledge.

The participants were not only proactive in gathering information about a topic, but were also proactive in seeking information about their course requirements/content and future

opportunities prior to enrolling in their course. Before choosing to study her master's degree, Darika first explored the various post-graduate options:

> I wanted to do Psychology and then when I looked more in depth into it I realised that I might not cope with clinical because I'm very empathetic and then I started researching into industrial and I like the whole working in the workplace and what Industrial Psychologists do.

Although Darika was not accepted into Industrial Psychology as a master's degree course, she was able to choose her current degree as an alternative because, after having done research into Industrial Psychology, she knew that what she would learn in her current degree could be applied to a possible future in Industrial Psychology.

Amy spoke a great deal about her activities which enabled her to gain greater information about possible courses. Prior to beginning her undergraduate degree, Amy job shadowed a number of people and spoke to her uncle who worked as a chemical engineer in water purification. The experience and knowledge gained enabled her to choose an undergraduate degree she found interesting. At the time of data collection Amy was in her second year of studies, however, she had already started planning what she would do after her undergraduate degree. In order to assist with this decision making, she had already started liaising with lecturers and external organisations in order to find out more about possible career directions.

Mala summarises the impact of being informed when she said: "I think if one's better informed of what is the end goal of what you're trying to achieve academically, your path to that will be more effective". It was clear from the responses that the participants actively sought information about their course, possible future directions, and specific topics within their course. This demonstrates their proactive approach to learning and implies that having

more information enables a student to better understand course material and make more informed decisions.

4.2.3.2) Self-monitoring and evaluation.

Another behaviour indicating the participants' proactive approach to their learning is their ability to self-monitor and self-evaluate. The participants actively monitor and evaluate their strategies and techniques used in relation to their performance.

Darika stated that she continuously monitors and evaluates the effectiveness of her chosen learning techniques. She stated: "I will always just see, okay I'm taking down notes, am I really learning anything or is it more beneficial for me to just read from the textbook?". This extract indicates that she continually assesses the use of her learning techniques while completing a task such as studying for an exam.

Nandi stated: "I monitor my performance from the previous semester and I look, I consult, where were my shortcomings and what is it that I need to do to up my game." This suggests that monitoring and evaluation does not only occur during a task (as suggested by Darika), but also on a long-term basis - from one semester to another. Nandi reflects on her strategies used from one point in time (when a mark is received for one semester) to another (when the mark is received for another semester).

Madu stated: "I like evaluating myself, I'm like okay, how much time did I allocate to studies, okay how much time did I allocate to other things, what model did I use, what type of times in the day did I study." From Madu's response it is clear that he did not only monitor and evaluate the use of study techniques, but also evaluated the impact of SRL strategies such as time management. The above extract from Madu suggests that, for him, monitoring and evaluating the effects of time management on performance is particularly important.

The participants did not only self-reflect in order to evaluate their learning, but also actively sought feedback from lecturers. For example, Nandi stated "I'm always looking for

feedback when I get back a test or an assignment, I'd always check and ask what is it that went wrong."

4.3) Self-Reported Learning Styles

During the interviews, the participants were asked to explain their understanding of the concept of learning styles, and were then asked to explain their learning style. These responses were grouped under the general heading 'self-reported learning styles'. During the conversations it became evident that the participants felt that an important ability influencing academic achievement is being able to change and adapt ones learning techniques according to the task. This is reflected in the subtheme 'changing and adapting' as seen in Figure 4.2 below.

Figure 4.2: Thematic map of participants' self-reported learning styles

When asked to explain their understanding of the term learning styles, some of the participants used labels or classification to explain different learning styles, and then went on to explain their own learning style accordingly. For example, in response to the question "what do you understand about the concept of learning styles?" Paul stated:

I would guess that it's essentially the way in which that you can understand and engage with information or process information, so I'm guessing that that would

either be auditory, whether you listen well, writing things down, reading I'm guessing

would be another one.

He then went on to explain his own learning style stating: "I'd say I'm auditory and visual,

but not visual with words, visual with pictures." Paul realised that he was "auditory and

visual" through evaluating his performance. He stated:

The fact that I naturally excelled at that [presenting ideas and talking], both me

presenting as well as receiving information through listening, as well as

complementing it with visuals, so pictures or posters or movies or some kind of visual

aid to go with it, I find it definitely started to work better for me.

Realising he performed better when working visually and auditorily, he started making use of

YouTube as a study technique and realised that he "would retain information a lot more by

doing that, than making notes and reading". This shows that Paul's awareness of his

preferred learning style enabled him to choose a study technique that was better suited to his

learning needs. Paul was able to classify learning styles in general as well as his own style in

particular, and this awareness seemed to influence his choice of study technique.

Amy and Mala also classified their learning styles; however, they did not use this

classification in order to explain their use of specific study techniques. They did not explicitly

link their use of learning techniques to their learning style. Amy stated: "I'm very visual and

kinetic, I always have to fiddle or see something", but then when speaking about how she

studies, she did not state that she uses visual or kinetic techniques, instead she emphasises the

need to change and adapt and thus makes use of a variety of techniques (this is further

explained under the subheading 'changing and adapting').

Mala stated that learning styles are "all the methods that you're using in order to

understand the work best, so like it may be auditory or visual…or I don't know like, written."

But when asked to explain her own learning style, she did not speak about a specific

preferred style; instead she explained her learning techniques. For example, when explaining her learning style, Mala responded: "I usually read through the readings and then I highlight all the major points and then I make my own notes, and then I keep reading through those notes until it becomes imprinted in my memory." Darika, Nandi and Madu also spoke about specific learning techniques when asked to explain their learning style. For example, when Darika was asked: "if you had to describe your learning style, how would you describe it?" she responded by stating "I like summarizing things". She went on to say: "I read it and then I'd do bullet points a lot and colours, each section would be a different colour. I've always used colours for different sections". Madu stated: "an example of mine is, my learning style is when I'm in class I don't like taking down notes, for example, I dwell more on what I hear from the lecturer". When Nandi was asked to explain her learning style she stated:

> My learning style is getting done as soon as possible, start early cause I've found that I can be quite slow or procrastinate so I don't always grasp things like this [snaps fingers], so I need to do the reading maybe once or twice but we have so many readings so I can't afford to start late, so I'd rather start early.

What is evident from the majority of responses is that the term learning style was used interchangeably with the concept of learning techniques. For most of the participants, when speaking about their learning style they are in fact speaking about their study techniques (i.e.: how they approach their learning tasks and how they commit information to memory). The only respondent that seemed to be aware of his particular preferred style of learning and thus learnt accordingly was Paul. The rest of the participants did not emphasise the importance of knowing a style of learning, but instead emphasised the need to be able to use a variety of learning techniques depending on the task. This led to the development of the sub-theme "changing and adapting".

4.3.1) Changing and adapting.

Most of the participants stated that their learning style, or techniques, changes over time. Therefore, they do not see a learning style as something that is static. Darika stated "I think my study styles have changed a lot. For some reason I am not the type of person who has the same kind of traits since primary school."

The idea of a learning style changing over time was echoed by Mala who stated:

> I must admit that my studying style and my ability to learn has improved through my studying, I don't think I was as effective when I was a first year, or maybe even a second year, or third year.

From the extract above it can be suggested that Mala is referring to her learning techniques rather than to learning styles. Although an individual's preferred style may change, a learning style is not able to be 'improved'; therefore, we can assume that Mala is referring to her techniques, suggesting that her use of techniques has improved over time which has improved her ability to learn.

What was particularly important to the participants was the need to continually adapt the study techniques used according to the task at hand. As Amy stated:

> I really struggled with finding a method that suited me most and I'll be honest with you, it changes all the time. Sometimes, some subjects I prefer learning with mind maps, some I prefer learning with asking questions and trying to answer them, some subjects like Biology I like creating pictures.

The participants stated that learning how to adapt study techniques to the study task is an on-going process. As Darika stated: "I think now especially we've just started [a specific module], I'm still trying to figure out how I'm going to study it." Even though Darika is already in her master's level of studies, she is still learning how to adapt and apply various study techniques to the given situation.

Madu had a particularly interesting response when discussing his learning style and study techniques. Although he realised that he was able to retain information presented verbally, he made a concerted effort to develop other ways of retaining information. After his friend pointed out to him that he was an auditory learner, Madu stated: "it changed my perception of learning, I became more interested in taking down notes in class, allocating a lot of time into reading my school work." He further stated: "it's very important to explore different modes of learning". Madu did not rely on using techniques only suited to his preferred auditory style of learning. He felt that developing a variety of techniques was important in order to cope in a variety of situations. He gave the example of having a boring lecturer – this would negatively influence his ability to retain verbal information because he would not want to listen. This could be mitigated by being able to take down notes that could be read after the lecture.

The participants suggested that teaching students a variety of task and year specific techniques would increase their ability to achieve. For example, Darika suggested that "just general study techniques" should be taught in first year, but then in second year students should be taught how to approach essays, and then in third year "the readings get intense" so student should be taught the "skill to know how to read".

4.4) Influences on the Awareness and Development of Learning Strategies, Learning Styles and Learning Techniques

Although the participants did not explicitly speak about enabling and inhibiting factors as originally intended (in order to address research question 4 as presented in the proposal), they did mention a few influences when considering their awareness and development of learning strategies, learning styles and learning techniques. The thematic map in Figure 4.3 below presents the three themes developed in order to categorise these influences. The first influence is the presence of support. Support came from various people namely; parents, other adults, and peers. The second influence was the responsibilities that

the participants had to fulfil. Finally, the post-graduate students stated that age and maturity influenced their awareness and development of learning strategies and learning techniques.
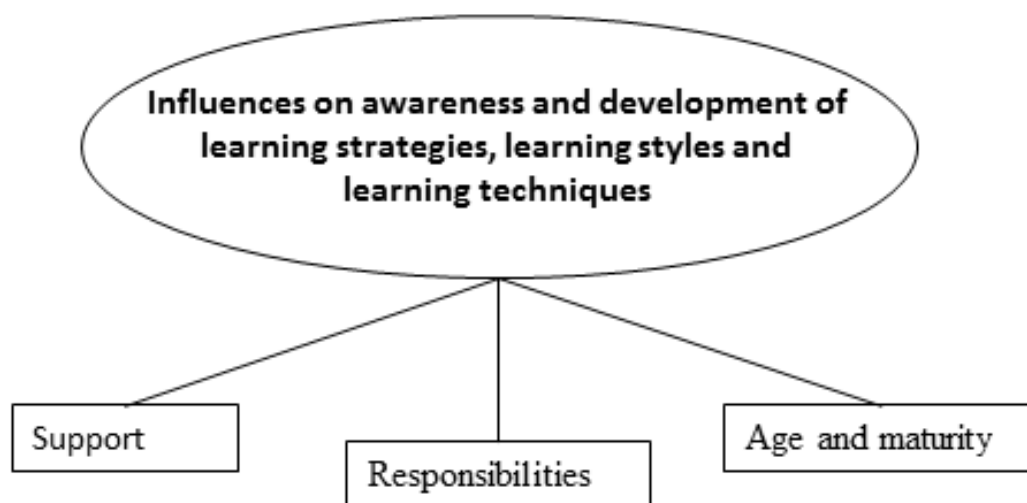

Figure 4.3: Thematic map of the influences on awareness, development and use of learning styles and learning strategies as reported by the study participants

4.4.1) Support.

Most of the participants mentioned that their parents positively influenced their ability to learn and to succeed in a number of ways. Firstly, for some of the participants, their parents assisted them in developing self-awareness which enabled them to choose a suitable course. Mala stated that she wanted to be a Psychologist from when she was about eleven or twelve years old, however, she did not know at the time that that is exactly what it was called. She said: "I probably didn't have the vocabulary to understand that but my parents helped me…they gave me the words 'Psychology'." Once Mala knew she wanted to be a Psychologist, her parents assisted her in becoming aware of how she could achieve this goal. As she stated: "they helped me to understand what I need to do to get to this end goal (becoming a Psychologist)".

For some of the participants, their parents' awareness of their needs provided them with support and enabled them to fulfil their student responsibilities. As Mala stated: "the fact that my parents are graduates has played a crucial role because they understood what the learning environment and the expectations of university are about." Darika said: "my parents are so motivating, if I tell them you know what I can't come on holiday this weekend cause I have an exam on Monday, they completely respect that."

Most of the participants mentioned the impact of school background and teachers on the awareness and development of study techniques and strategies. For example, Darika stated: "I was taught in school, I was lucky ever since primary school they would teach us about mind mapping, about writing notes…" Darika's teachers exposed her to a variety of study techniques, increasing her awareness thereof. Nandi attributed the development of effective time management to her grade 10 Geography teacher. She stated that her "geography teacher was very strict about it - every day you must carry a diary and a daily file."

While at university, lecturers can also influence a student's learning strategies and techniques. For example, Nandi stated: "I had some very, very helpful lecturers as well, who are encouraging if you are doing well and they encourage you to do postgrad and they highlight your areas of strength and your areas of weakness and how you can improve in those areas of weakness". This statement from Nandi demonstrates that lecturers can be a source of motivation and can assist with the self-evaluation process by pointing out the areas needing improvement.

The participants also stated that their peers had an influence on their awareness and development of various SRL strategies. For example, Nandi stated that peers influence her ability to stay motivated. She said: "I stick close to people who are doing more or less of what I'm doing, so I generally look for people who are rather motivated…so it's basically

knowing to select the right academic friends or colleagues". This statement by Nandi implies that a student has an active role in choosing how peers can influence him/her. A student must actively select friends that will be a positive influence. This active selection of friends is echoed by Madu who stated: "I'm cautious with my friends that I will audit my friends, if you guys are not adding any value to my school work and student life."

The participants suggest that it is beneficial to have friends in the same field as them, as Mala said: "I have always had supportive friends, I've managed to always have friends that are in the field, that understand what I'm going through, so I really think social support of my friends, people in the field, has been crucial." Selecting friends in the same field helps to ensure that they understand and can sympathise with your needs.

The participants also stated that peers had an influence on their awareness and development of learning styles and learning techniques. Amy had heard about different learning styles through a friend of hers who had been to someone to assist with study methods. Darika stated: "I saw a friend doing the bullet points and then I started it and I started remembering from there". Madu was made aware of his ability to retain auditory information by a friend of his. This friend came to Madu and said "do you realise though that you do a lot more listening in class". This helped Madu realise that he is able to easily retain information presented verbally.

4.4.2) Responsibilities.

The participants also mentioned the impact of responsibilities on their ability to learn and achieve. For most of the participants, they were not expected to work while studying, and they could therefore focus their efforts on their academics. When asked "why do you think you're a successful student?" Darika responded by saying:

> The first this that jumped into my mind was my support system, because I think
>
> sometimes if my parents said you need to go and get a job, I would never manage, if I

would have to work five days a week and then still go home and study… when I

became a tutor I felt like it was too much, so I didn't do it this year, so they (her

parents) never ever push me.

This extract from Darika suggests that she feels that not having to work while studying has

positively influenced her ability to achieve. Juxtaposed to this is Paul who felt that his

strategy use improved by having the added responsibility of having to work while studying.

Paul had to work as a waitron while studying which forced him to develop better time

management skills. Paul stated: "when I first started studying, part of the deal was I had to

waiter or work on the side…so without sacrificing anything, the only way you're going to fit

all of those into your life is having good time management."

4.4.3) Age and maturity.

Most of the participants interviewed were in a post-graduate course. These

participants stated that their age and maturity impacted their strategy use. Specifically, they

mentioned that their age and maturity impacted their self-awareness of good learning

strategies; their ability to focus on their studies; and their ability to lead a more balanced life

style. For example, when asked how he thinks he has managed to do well in his current

course, Paul responded by saying: "the major thing for me, I think is age." Later he stated: "I

am more willing to throw myself into this and be more dedicated to it". The impact of age on

the ability to focus and be more dedicated to one's studies is echoed by Mala who said: "I've

matured so much and I know what needs to be done in order to achieve now, so I think I'm a

lot more focused". From this statement by Mala it is suggested that maturity comes with age.

Juxtaposed to the post-graduate students is Amy – the only undergraduate student in

this study. Amy's age and level of maturity also seemed to impact her behaviour but in a

negative direction. Amy was the only participant who spoke about bunking classes and only

learning what the lecturer says is necessary to learn. She also procrastinated and left her

studying until the last minute. She justified this by stating: "I learn best when I'm under pressure". She went on to say: "I start cramming". She did not seem to have found intrinsic value in what she was studying, and was instead motivated by external influences such as marks, getting an award, and her parents paying her fees. Although this may be attributed to age and maturity, it may also be attributed to the differences between undergraduate and post graduate studies. When in a general undergraduate degree such as a BSc, students may have to take prerequisite courses in which they are not interested, however, in a post-graduate degree, the student has had the opportunity to select the degree that they are interested in and that gets them closer to their desired career.

4.5) Conclusion

Findings from the interviews with the participants describe their SRL strategies; their self-reported learning styles; and the influences on their awareness and development of learning strategies, learning styles and learning techniques.

When discussing their learning strategies that they felt influenced their achievement, the participants highlighted motivation, time management and proactive behaviours. The participants felt that being motivated – both to complete specific tasks as well as to remain motivated in general – was crucial to their achievement ability. Although they mentioned a number of sources of motivation, they felt that being passionate about a course, and seeing the course as a means to achieving future goals enabled them to choose a course that they would be motivated to succeed in. The participants also emphasised the importance of being able to effectively manage their time in order to ensure balance and to ensure that they allocated enough time toward their academic requirements. Through the conversation with the participants it became evident that they engaged in two crucial proactive behaviours – gathering information, and self-evaluation and monitoring. In order to assist with making a good course choice (one that they are motivated to achieve in), and to ensure good

understanding of a topic within the course, the participants gathered information from various sources. In order to enhance their learning and to ensure high achievement, the participants evaluated their performance and monitored their use of learning strategies and techniques.

When reporting their learning styles, some of the participants classified their style of learning. For example, they stated that their style is visual, kinetic or auditory. Although some participants spoke about specific styles, most of the participants rather spoke about their learning techniques. The participants highlighted the importance of being able to adapt to various learning requirements by changing one's learning techniques accordingly. Therefore, it seems as though, for these participants, studying according to a preferred learning style is not important, instead it is important to have a variety of study techniques at your disposal so that it is possible to learn regardless of the subject or way in which the material is presented.

The findings show that the participants felt that the influence of having support, responsibilities, and age and maturity impacted their awareness and development of learning strategies, learning styles and learning techniques. The participants felt that their parents, teachers and peers helped them to develop goals, awareness of various study techniques, and time management skills. They also supported and motivated them through their understanding of their needs.

Chapter 5: Discussion

5.1) Introduction

Chapter 5 presents a discussion of the findings as they relate to the research questions stated in both the introduction and methodology chapters. This chapter will therefore begin by discussing how high achievers (the study participants) self-regulate their academic learning and how this impacts their ability to achieve. Secondly, the perceived preferred learning styles of high academic achievers, and how these influence the study techniques of high academic achievers is discussed. Thirdly, the influences on high achievers' awareness and development of learning strategies, learning styles and learning techniques are discussed. This chapter concludes by bringing the findings together in order to address the research aim.

5.2) High Academic Achievers' Self-Regulated Learning

Research question one asked: "How do high academic achievers self-regulate their academic learning and what role does this play in high achievers' attainment of high academic achievement outcomes?"

The findings indicate that the participants self-regulated their learning through the use of a variety of SRL strategies. These strategies were grouped into three main themes: being motivated, effective time management, and proactive approach to learning.

5.2.1) Being motivated.

The findings indicate that the participants felt that a key influence on their achievement was the fact that they were motivated. The findings from this study therefore support studies that have found that motivation significantly influences academic achievement (De Zoysa, Chandrakumara, & Rudkin, 2014; Muhammad, Bakar, Mijinyawa, & Halabi, 2015; Sharma & Sharma, 2018). The participants explicitly mentioned the importance of motivation, and then elaborated on their sources of motivation. During the conversation with the participants, it became clear that they were motivated to complete specific tasks as well as motivated in

general. In both cases, the participants mentioned a variety of motivating sources as seen in Table 4.1.

5.2.1.1) Focusing on a task.

Within the literature on SRL, motivation has predominantly been viewed as a task-specific strategy (de Boer et al., 2012; Zimmerman, 2002; Zumbrunn et al., 2011). When completing a task, students are motivated either by their inherent interest in the task, or by achieving an outcome separate from the task itself. Inherent interest in a task is referred to as intrinsic motivation whereas completing a task for a separate outcome is referred to as extrinsic motivation (de Bilde et al, 2011). When looking at the findings in Table 4.1 it becomes evident that the participants were both intrinsically and extrinsically motivated in order to complete a task. The participants were intrinsically motivated by task interest, and extrinsically motivated by a number of sources including deadlines, self-initiated rewards and punishments, making a commitment to others, marks, and avoidance of stress and guilt. These extrinsically motivating sources can be divided into two categories: those initiated by others and those initiated by the individual. 'Deadlines' is the only extrinsic source initiated by others. The remaining extrinsic sources of motivation were all initiated by the individual.

These findings suggest that the participants were intrinsically motivated when they were interested in and enjoyed the task, but drew on extrinsic motivating sources in order to complete tasks that were less interesting or enjoyable. The majority of these extrinsic sources of motivation were initiated by the participant. Therefore, even though the majority of the sources of specific motivation were extrinsic, the participants still exerted control over their motivation. In order to be able to control their motivation, the participants displayed a high level of self-awareness of emotions and needs. For example, the participants were able to initiate engagement in a task because they were aware of their feelings of stress and/or guilt and knew that these emotions were caused by their lack of engagement in their academic

tasks. They were also able to motivate themselves through a system of rewards and punishments because they were aware of their likes and dislikes.

In the literature on intrinsic and extrinsic motivation from a SRL perspective, intrinsic motivation is seen as being associated with greater self-regulation and better academic performance (Vansteenkiste et al., 2005; Zumbrunn et al., 2011). Findings from this study suggest that students can achieve using both intrinsic and extrinsic motivational strategies. What seems to be important is that the student is aware of various motivational sources that will motivate them to engage in and successfully complete a task, and that they have a degree of control over these sources.

5.2.1.2) General motivation.

What was evident during the conversations with the participants was that they spoke more about motivation in general than in relation to a specific task. They did not stress the need to be motivated in order to complete individual tasks, but instead stressed the importance of being motivated in general. This suggests that, in order to achieve, students need to have sustained motivation instead of periodic, task-specific motivation.

General motivation was influenced by a number of sources such as: the prior effort put in before being accepted into a course; being competitive and wanting to be first in class; parents having paid the study fees; wanting to achieve an award; wanting to achieve future goals such as being independent and travelling; valuing learning and knowledge generation; by being passionate about a course; and seeing that the course will lead to a career in the field of interest.

Although a number of sources of general motivation were mentioned by the participants, the key sources emphasised by all participants were passion and being future-orientated. The findings demonstrated that the participants felt that being passionate about their course kept them motivated. As found by Jouhari, Haghani, and Changiz (2015), lack of

interest in the field of study inhibits SRL. This idea of passion as a source of general motivation can be related to intrinsic motivation. Although intrinsic motivation is associated with a specific task (Schunk & Zimmerman, 2008; Zumbrunn et al., 2011), the 'task' in this instance is the participant's entire degree. When applied using this understanding, it is suggested that the participants are intrinsically motivated to successfully complete their degree (as opposed to completing a specific learning task such as studying for a test or writing and assignment). Their passion for their course enabled them to remain motivated.

This idea of passion also highlights the role of emotions in learning. Studies have shown that students' emotions influence their motivation and self-regulation, and these in turn effect academic performance (Mega, Ronconi, & de Beni, 2014). The students specifically stated that they are motivated to achieve because they are 'passionate' about their course content. This suggests that the course elicits positive emotions such as enjoyment which is juxtaposed to boredom. In a study conducted by Pekrun et al (2011) enjoyment positively related to SRL whereas boredom related negatively to SRL.

The second major source of general motivation was the presence of future goals (i.e.: being future-orientated). It became clear during the conversations with the participants that they were all future-orientated as opposed to present-orientated. Their academic achievement was not bottom up in nature – focusing on achieving on present tasks and then consequently achieving in the course as a whole; but instead was top down – focusing on wanting to achieve future goals and then using this as a way to remain motivated in order to achieve in the course as a whole. This idea of being motivated by future goals is explained by the Future Time Perspective (FTP) using the Self-Determination Theory. According to the FTP, individuals can become preoccupied with a certain time zone (de Bilde et al., 2011). When someone is future-orientated, they set distant goals (Husman & Lens, 1999). Therefore, the presence of these distant goals influences a person's FTP. Using this theory, the participants

in this study can be classified as having a long FTP. Studies have shown that this long FTP is associated with several optimal study outcomes including better grades (Zimbardo & Boyd, 1999), better engagement in learning tasks (Peetsma, 2000), and better time management (Harber et al., 2003).

The participants were not only labelled as future orientated because of their future goals but also because of their behaviour and decisions which were influenced by their future outlook. This behaviour was explained under the sub-theme 'gathering information'. Within this sub-theme, findings demonstrated that the participants actively sought information about their course prior to enrolling, as well as information about future career possibilities. By actively seeking this information, the participants were able to choose a course about which they were passionate and in which they could envisage a future or that would set them on the path to achieving their future goals. This again shows that the participants' decisions and choices were impacted by their long FTP.

The findings associated with motivation suggest that enhancing a student's general motivation may positively influence their ability to achieve. Therefore, understanding the processes involved in establishing and sustaining this general motivation may assist student learning. The findings suggest that general motivation involves interest and future-orientation, however, they do not indicate if there are causal links or a dynamic interplay between these concepts. For example, it may be that seeing a future in a course generates interest, in other words, being motivated by extrinsic future goals may over time become internalised leading to an intrinsic interest; or it could be that individuals become future orientated (i.e.: establish future goals) once they figure out their interests. In other words, inherent interest is necessary before an individual is able to expand their present-focus toward a future-perspective. Future research could focus on these concepts in interviews with high academic achievers in order to gain a better understanding of the relationship between

general motivation, interest, and future-orientation, and then to understand how this impacts SRL.

5.2.2) Time management.

Findings from this study demonstrate and reiterate the importance of time management in relation to academic achievement. The participants reported that time management is a crucial skill influencing their ability to achieve. Although the participants highlighted the importance of time management, findings from this study provide a variety of options as to how one can go about managing one's time. While some students prefer to use a diary, others make use of wall charts, and still others do not write anything down. What this suggests is that in order to assist students with time management skills, a variety of methods can be demonstrated and then the students should be encouraged to experiment with these methods in order to establish which method is best suited to them.

SRL literature explains time management as a SRL strategy. Zimmerman (2002) incorporates time management as a self-control strategy that falls within the performance phase of SRL. Time management is again seen as a task specific strategy as it refers to planning the use of time during a task (Panadero & Alonso-Tapia, 2014). In the present study, findings suggest that time management is a task-specific strategy but also a continuous process. The participants were able to *plan* their time (a planning strategy in the forethought phase), and were then also able to *manage* their time (a self-control strategy in the performance phase). The participants did not only plan according to a specific learning task, but instead started with a broad view of all the tasks needing to be completed on a termly, weekly and then daily basis. They needed to continuously manage their time in order to ensure efficient use of time and to maintain a balance between their learning needs as well as their social and personal needs.

The findings also demonstrate that the participants were not only able to allocate their time according to their needs, but were aware of how to prioritise their tasks. The participants prioritised their academic requirements above their social and personal requirements, thus ensuring they spent enough time on their learning tasks. Furthermore, they were able to prioritise the learning tasks within the allocated study time.

The participants also indicated that time management involved self-monitoring and evaluation. The participants monitored their use of time and evaluated its effects on their performance. When the participants did not achieve their desired goals, they reflected on their time spent – both the duration and the actual time of day – on the learning tasks.

These findings suggest that students would benefit from being taught effective time management skills associated both with time planning and time management. Time planning involves the allocation of time to fulfil different needs. Time management involves developing the ability to prioritise tasks and then to self-monitor and evaluate one's time use. Studies conducted on time management interventions have produced varying results, however, it is suggested that time management skills can be enhanced through interventions that require continuous application and reinforcement (Zimmerman, Greenberg & Weinstein, 1994).

5.2.3) Proactive approach to learning.

Findings from this study indicated that the participants were proactive. As stated by Zimmerman (2002), 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" (p. 65-66). The findings under the sub-themes 'gathering information' and 'self-monitoring and evaluation' demonstrate these behaviours.

5.2.3.1) Gathering information.

The fact that the participants gathered information about specific topics covered in their course as well as about their course content and future prospects demonstrates that the participants do not perceive learning as something that was 'happening' to them, but instead take responsibility for their own learning.

The quote above from Zimmerman (2002) implies that self-regulated learners are able to be proactive learners because they are aware of their strengths and limitations, in other words, they are self-aware. Findings from this study demonstrate that, in order to gather information about specific topics in the course, the participants had to first be aware of their lack of understanding and then engage in behaviour that filled this gap. This suggests that a student will be able to engage in information seeking to better understand a topic when they are aware that they do not have sufficient understanding of a topic. This gathering of information in order to better understand a topic can be equated to what is described in SRL literature as 'help seeking'. Help seeking is defined as "the process of seeking assistance from other individuals or other sources that facilitate accomplishing desired goals" (Karabenick & Berger, 2013, p. 238). In this case, the goal is to better understand a topic. Help-seeking is considered a form of behavioural self-regulation (Karabenick & Berger, 2013). Studies have shown that good self-regulators engage more often in help seeking – seeking assistance more often when needed (Schunk & Zimmerman, 2008).

According to the social cognitive view of SRL, help seeking behaviour can be influenced by the learning context (Karabenick & Berger, 2013). Teachers/lecturers can either foster or inhibit help seeking behaviour. For example, studies have found that when teachers are viewed as supportive, students are less inhibited when asking questions and are therefore more willing to ask for help (Karabenick & Berger, 2013). Therefore, lecturers and

other support structures could positively influence students' development of help seeking behaviour.

The quote by Zimmerman (2002) also suggests that being driven by self-set goals influences proactive behaviour. The findings from this study suggest that being future orientated (having future goals) did indeed cause the participants to engage in proactive behaviour; specifically, the participants gathered information about possible courses and careers. It is suggested that the participants engaged in information gathering about courses and careers because they have a long FTP.

The findings suggest that having a proactive approach to learning influences academic achievement. Therefore, assisting students in developing a proactive approach would better enable them to achieve. This proactive approach is influenced by self-awareness and goal-setting. Therefore, a proactive approach can be fostered through assisting students in becoming self-aware and setting distant goals.

5.2.3.2) Self-monitoring and evaluation.

As stated by Zimmerman (2002), self-regulated learners "monitor their behaviour in terms of their goals and self-reflect on their increasing effectiveness" (p. 66). The findings in this study demonstrate this by indicating that the participants self-monitored and evaluated their behaviour. They specifically referred to the monitoring and evaluation of strategies and techniques in order to achieve certain goals such as retaining information and good marks. In order to monitor their learning, the participants assessed their ability to recall information, and then linked this to the strategy used. The participant would then change their strategy if they did not adequately recall the information. They also monitored their general performance by looking at their results, and then again attributed this performance measure to the use of various strategies.

This ability to self-monitor and evaluate one's own learning is referred to as a metacognitive strategy in the SRL literature. Metacognition refers to the learner's ability to think about their cognition and have control over these processes (Zimmerman, 1989). Metacognitive processes involve being able to plan, organise, monitor and evaluate learning (Zimmerman, 1989). Goal-setting forms part of this planning and organising. Therefore, students must be able to set goals that are attainable, and then engage in the process of monitoring and evaluating the strategies used to achieve these goals. Therefore, students should not only have distant goals, but should also set task-specific goals.

Studies suggest that it is possible to assist learners to develop self-monitoring and evaluation skills (Effeney, Carroll, & Bahr, 2013; Shimabukuro, Prater, Jenkins, & Edelen-Smith, 1999; Zumbrunn et al., 2011). This study supports the use of interventions that assist students to develop the ability to self-monitor and evaluate their learning. In order to assist learners with developing self-monitoring and evaluation skills learners should be assisted with goal setting. In order to enable learners to set relevant goals, the teacher/lecturer should make the overall learning goal explicit (Williamson, 2015). The findings from this study suggest that students should be shown how to set task-specific as well as distant goals. The students should then also be given the opportunity to self-reflect so that they can self-assess and monitor their goal achievement (Nilson, 2013).

5.3) High Academic Achievers' Perceptions of Learning Styles and their Impact on the Use of Learning Techniques

Research question 2 asked: "What are the perceived preferred learning styles of high academic achievers, and how do these preferred learning styles influence the learning techniques of high academic achievers?"

Fleming's VARK model of learning styles can be used to explain the participants' understanding of learning styles. The VARK model developed by Neil Fleming is arguably

the simplest and is therefore often used in order to assist student with study skills (Cekiso, 2011). The model name is an acronym for the four sensory modalities individuals prefer to use in learning – visual, auditory, reading/writing, and kinaesthetic. The model therefore acknowledges that students have different preferred approaches to how they process information.

The participants used the terms 'visual', 'auditory', 'reading', 'writing' and 'kinetic' when talking about learning styles suggesting that they have a VARK understanding of the concept. However, although they classified learning styles according to the VARK model, only one participant used this knowledge in order to influence his choice of study techniques. This participant stated that he was a 'visual' and 'auditory' learner and therefore found that making use of YouTube videos enabled good retention of learning content. The remaining participants spoke more about their specific learning techniques, confusing the term 'learning styles' with 'learning techniques'. These learning techniques are referred to as learning strategies in the learning style literature. Learning strategies are "the strategies students adopt when studying" (Rahadian & Budiningsih, 2017, p. 28). These learning strategies (or learning techniques as expressed in this study) can be equated to cognitive strategies as defined in SRL literature. Cognitive strategies refer to task-specific strategies used in order to elaborate, rehearse or organise material.

5.3.2.1) Needing to change and adapt.

The findings from this study suggest that the participants did not view it as important to learn according to one's preferred learning style; instead they felt that the ability to change and adapt one's learning style according to the task content and requirement was more important. This relates to the SRL metacognitive strategy – self monitoring and evaluation. As previously stated, the participants explicitly said that they monitor their retention of information through recall strategies, through looking at their assignment results, through

comparing performance across semesters, and through feedback from lecturers. They then make adjustments to their learning by adjusting SRL strategies such as time management, but also adjust their learning techniques. The participants acknowledged that the ability to retain different types of information, and to perform on different tasks, requires the use of different techniques. They therefore employ task specific study strategies/learning techniques and adjust their approach as needed.

What this suggests is that, in order to assist students to achieve academically, students should be exposed to a variety of learning techniques, be shown how to apply these techniques to different situations, and then be taught how to monitor and evaluate the use of the different techniques. Therefore, it is suggested that the findings from this study demonstrate that the ability to self-monitor and evaluate one's learning and performance, and then to change and adapt one's strategy use according to one's evaluation, has a greater influence on academic achievement than the ability to learn according to one's preferred learning style.

Therefore, this study is in agreement with Kolb who suggested that students would be best suited by being exposed to different types of learning styles in order to maximise their development as learners (Glonek, 2013). The concept of learning styles can be used to demonstrate to students a variety of modes of learning accompanied by a variety of techniques.

5.4) Influences on Awareness and Development of SRL Strategies, Learning Styles and Learning Techniques

Research question 3 asked: "What influences high academic achievers' awareness and development of learning strategies, learning styles and learning techniques?"

The social-cognitive theory of SRL acknowledges that SRL is not asocial in nature (Williamson, 2015). As Zimmerman (1989) explains, self-regulation is a process that is

determined by behavioural as well as environmental influences. Therefore, SRL can be learnt through modelling, scaffolding and direct instruction (Watson, 2004). The findings from this study suggest that the participants' SRL strategies and awareness and use of learning styles and techniques were influenced by social influences such as parents, teachers, peers, and having other responsibilities. Other studies have also found that parents, teachers, and peers influence SRL (Jouhari et al., 2015; Moos & Ringdal, 2012; Paris & Paris, 2001; Patrick et al., 2007). Age and maturity also influenced the use of learning strategies. As stated by Zimmerman (1990), "with age, children can reflect on their beliefs and can articulate them more accurately" (p. 13). The developmental changes that occur as children get older mean that they are cognitively and metacognitively better equipped to self-regulate their learning.

5.5) Conclusion: Bringing it All Together

This chapter discussed the findings in relation to each of the three research questions. These findings suggest that the high academic achievers in this study self-regulate their learning through the use of various SRL strategies, namely: being motivated, efficient time management, and having a proactive approach to learning. Furthermore, the findings suggest that although the participants articulated a VARK understanding of learning styles, they did not use this knowledge in order to influence their choice of learning techniques. Instead, they emphasised the importance of being able to change and adapt the techniques used according to the task. This suggests that being exposed to a variety of learning techniques (or cognitive strategies as expressed in SRL literature) can assist students with their learning. It also emphasises that the ability to self-monitor and self-evaluate is an important ability related to being able to achieve. Finally, the findings suggest that the awareness and development of these strategies is influenced by social factors such as parents, teachers and peers, as well as by the presence of responsibilities, and age and maturity.

5.5.1) A unifying term: self-awareness.

When reflecting on the findings it becomes apparent that each of the individual findings can be explained using one general term: self-awareness. The findings demonstrate that the participants were able to discuss their learning strategies confidently, giving a detailed account of their use. This indicates that they were self-aware of their learning strategies. They were aware of their sources of motivation, could explain how they managed their time, and were aware of when they needed assistance. They were aware of their own needs which influenced their ability to maintain balance, and to draw on sources of motivation which would enable them to engage in a task and remain motivated throughout their course. They were aware of whether or not they had sufficiently retained information, and this awareness enabled them to adapt their learning strategies and learning techniques. They were able to gain greater self-awareness through being able to self-monitor and evaluate their learning. They were also aware of how their parents, teachers and peers influence their strategy awareness and development and were able to reflect on how their strategy use improved over time. Therefore, the findings suggest that a key characteristic that influenced the participants' ability to achieve is self-awareness.

5.5.2) Addressing the aim of the study.

The aim of this study was to determine and understand the self-reported learning strategies and characteristics of high academic achievers that influence their ability to achieve. When using the three research questions in order to address this aim the findings suggest that high academic achievers attribute their achievement to five SRL strategies and three general characteristics. Awareness and development of these strategies and characteristics is influenced by social factors as well as the presence of different responsibilities and age and maturity.

The five SRL strategies can be described as task-specific abilities. When approaching a learning task, the high academic achievers in this study are able to make use of cognitive strategies (i.e.: learning techniques) in order to retain information; to regulate their motivation; to effectively plan their time; to seek additional information in order to better understand the learning material; and to self-monitor and evaluate their cognitive a behavioural strategy use.

Although the findings demonstrated task-specific strategies used by the participants, they also suggest that the participants had certain characteristics that influenced their achievement. These included good self-awareness, long-term motivation, and a proactive and disciplined attitude to their learning. It was clear from the conversations with the participants that they were self-aware of their strengths and weaknesses as well as their use of learning strategies. Furthermore, they were motivated in general in order to continually perform throughout their course. The findings suggest that interest in the course as well as being future-orientated fosters sustained motivation. Findings also suggest that the participants were proactive and disciplined. They were not passive recipients of information but instead proactively sought out information ensuring that they had sufficient understanding of topics covered in the course. They also ensured that they had information about future prospects in order to be able to make informed decisions. The participants were disciplined in that they ensured that they continuously applied key strategies such as time management and self-monitoring and evaluation to all aspects of their lives. This took effort on the part of the participant; again showing their proactive approach.

Chapter 6: Conclusion

6.1) Introduction

This chapter presents the conclusion to the dissertation after the study background, purpose and research questions are reiterated. A summary of the findings is then presented followed by the implications thereof and suggestions for future research.

6.2) Summary of the Study's Background, Purpose and Questions

This study grew out of the researcher's personal experience with students of various ages which led to the development of an interest in study habits, attitudes and skills. The researcher was particularly interested in gaining an understanding of the study habits, attitudes and skills of high academic achievers at university.

This study was set against the background of higher education issues in South Africa. Over the past few years, South Africa's higher education system has necessarily responded to the transformation needs associated with both global and national social, economic and political pressures. As a result of these pressures, South African universities have identified a number of challenges. Of specific interest in this study was the issue of success. The issue of success has been conceptualised in relation to access, throughput, and dropout (CHE, 2013). This focus on failure has contributed to a deficit discourse and mode of thinking (Smit, 2012). Studies which have been conducted in order to understand the issues influencing achievement have been done in ways that contribute to a deficit conceptualisation of students (Coleman, 2016). This study responded to this deficit conceptualisation by focusing instead on high academic achievement. This focus on high academic achievement or academic excellence is a relatively new field in higher education research.

In order to gain a better understanding of high academic achievement, the following aim was developed: To determine and understand the self-reported learning strategies and characteristics of high academic achievers that influence their ability to achieve. In order to

provide focus to this study, literature on SRL and learning styles were used as a framework to develop three research questions:

1. How do high academic achievers self-regulate their academic learning, and what role does this play in high achievers' attainment of high academic achievement outcomes?

2. What are the perceived preferred learning styles of high academic achievers, and how do these preferred learning styles influence the learning techniques of high academic achievers?

3. What influences high academic achievers' awareness and development of learning strategies, learning styles and learning techniques?

6.3) Summary of the Research Findings

In order to explore the attributes and skills of high academic achievers, semi-structured interviews were conducted with six students registered at the University of KwaZulu-Natal who were members of the GK Society. The interview schedule was constructed by the researcher using concepts within SRL and Learning Styles theory in order to answer the three research questions.

Findings resulting from a semantic thematic analysis were presented in Chapter 4 and then discussed in Chapter 5 in relation to the research questions. The findings to research question 1 suggested that the participants self-regulated their learning through the use of a variety of SRL strategies. Three main themes were developed that demonstrated the strategies that the participants felt significantly influenced their academic achievement. These three themes were: being motivated, effective time management, and proactive approach to learning. When discussing these three themes, five key SRL strategies were proposed namely: intrinsic motivation; future goal orientation; time management; help seeking; self-evaluation and monitoring. Therefore, this study suggests that providing ways in which

students can develop these five SRL strategies would prove useful in assisting student learning and achievement.

Findings to research question 2 demonstrated that some of the participants were able to describe their preferred learning style by making reference to Fleming's VARK modes. Others were not able to speak about a specific style but instead described their techniques. The findings suggest that the participants' selection of learning techniques was not influenced by a preferred learning style, but instead was influenced by the task. The participants felt it was important to be able to change and adapt the techniques used according to the task content and requirements. This finding suggests that the participants felt that awareness and use of two SRL strategies were important, namely: cognitive strategies and meta-cognitive strategies. These cognitive strategies relate to techniques used in order to elaborate, rehearse and organise material so that the information can be studied, retained and recalled. Metacognitive strategies involve the ability to self-monitor and evaluate ones learning and performance (de Boer et al., 2012; Williamson, 2015; Zimmerman, 2002).

Findings to research question 3 suggest that the participants felt that their parents, teachers and peers influenced their awareness and development of learning strategies and techniques. They also felt that their responsibilities influenced their learning. For example, some participants felt that by not having to work, they had more time available to study. One participant felt that the responsibility of having to work while studying positively influenced his development of effective time management skills. The post-graduate participants also suggested that their age and maturity influenced their general self-awareness and use of strategies.

When amalgamating the findings for the three research questions in order to address the aim of this study, it is suggested that high academic achievers attribute their achievement to five task-specific abilities and three characteristics. The five task-specific abilities include

the use of cognitive strategies (i.e.: learning techniques); the regulation of motivation; effective time management; help-seeking; and self-monitoring and evaluation. The three characteristics included self-awareness, long-term motivation (i.e.: general motivation), and having a proactive and disciplined attitude.

6.4) Implications of the Study

The findings from this study contribute to research focusing on high academic achievement. The phenomenon of achievement has predominantly been studied from a quantitative approach; therefore, the findings generated from a qualitative approach provide further insight into the processes involved in high academic achievement. Through using a qualitative approach, high achievers were given a voice in elaborating on their own learning instead of having to respond to pre-determined questionnaires.

In order to gain a greater understanding of high academic achievement, this study used SRL and Learning Styles as a framework. Therefore, the findings from this study can be used to further understand how SRL processes and learning styles are used in practice. Specifically, this study indicated that, when approaching a task, the high achievers felt that five SRL strategies were important, namely: selecting appropriate cognitive strategies; regulating motivation; time management; help-seeking; and self-monitoring and evaluation. The findings suggested that learning styles are not used by high achievers to inform their selection of learning techniques, therefore suggesting that SRL theories are more applicable to understanding high academic achievement than Learning Styles models. Furthermore, the findings support the social cognitive view that social factors influence an individual's ability to self-regulate their learning.

The findings related to the use of SRL strategies can also be considered when forming interventions to improve student learning. In recent years, courses, orientation programmes and online support structures have been offered at South African Universities in order to

improve student learning. These courses/programmes have focused on bridging the transitional difficulties experienced by students entering university, and include topics such as time management skills; reflections on learning and expectations; and developing good study methods. The findings from this study contribute toward these interventions and suggest that interventions should include the following strategies: selection of cognitive strategies; regulation of motivation; time management skills; engagement in help-seeking; and ability to self-monitor and evaluate. As indicated in the social cognitive view of SRL, and supported by the study findings, educators and peers influence the awareness and development of SRL strategies. Therefore, lecturers need to be aware of their role in students' learning and should create spaces in which students are able to learn and develop SRL strategies through observation, modelling and self-reflection, both in interaction with their lecturers and peers.

Furthermore, the findings suggest that key characteristics influence academic achievement. These include self-awareness, general motivation, and having a proactive and disciplined attitude.

6.5) Recommendations for Future Research

Findings from this study suggest that sustained motivation (i.e.: being motivated in general) is a key characteristic which influenced high academic achievers' ability to achieve. Furthermore, the findings suggest that sustained motivation may be linked to future-orientation and interest. Also, findings from this study indicated that the participants had a proactive approach to learning. It is suggested that this proactive approach is linked to sustained motivation and being future-orientated. Future studies could explore the dynamics between these concepts (sustained motivation, interest, future-orientation, and proactive approach) in order to better understand the possible causal links, and then explore how these processes influence students' use of SRL strategies. This would aid in focusing interventions aimed at improving student achievement.

The findings from this study also suggest the importance of self-awareness. Self-awareness of one's learning influences academic achievement. Therefore, studies should continue to investigate ways in which self-awareness can be harnessed and taught for students in higher education.

This study advocates for continued research into high academic achievement or academic excellence through the use of qualitative studies, particularly focusing on further exploring the dynamic processes involved in high achievers learning, and factors that influence these processes. In this study one-on-one, semi-structured interviews were used. Alternate approaches could be used such as focus groups or longitudinal studies.

The goal of such studies should be to understand how and why high academic achievers achieve and then to use this information to inform interventions aimed at assisting students to improve their own learning. This is set against the background of the goal of higher education which is to produce independent, life-long learners capable of responding to the demands of a global world.

References

Agee, J. (2009). Developing qualitative research questions: a reflective process. *International Journal of Qualitative Studies in Education, 22*(4), 431-447. DOI: 10.1080/09518390902736512

Al-Hebaishi, S. (2012). Investigating the relationship between learning styles, learning strategies and the academic performance of Saudi English majors. *International Interdisciplinary Journal of Education, 1*(8): 510 – 520. Retrieved from: https://pdfs.semanticscholar.org/07ea/2f1fcca15d49ccb57b0b658050e1ce68a55e.pdf

Aquino, L. (2011). Study habits and attitudes of freshmen students: Implications for academic intervention programs. *Journal of Language Teaching and Research*, *2*(5), 1116-1121. DOI: 10.4304/jltr.2.5.1116-1121

Bostrom, L., & Lassen, L. (2006). Unraveling learning, learning styles, learning strategies and meta-cognition. *Education and Training, 48*(2/3), 178-189.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2): 77 - 101. DOI: 10.1191/1478088706qp063oa

Cano-Garcia, F., & Hughes, E. H. (2010). Learning and thinking styles: an analysis of their interrelationship and influence on academic achievement. *Educational Psychology*, *20*(4), 413-430.

Cassidy, S. (2004). Learning styles: an overview of theories, models, and measures. *Educational Psychology, 24*(4), 419-444. Retrieved from: https://acdowd-designs.com/sfsu_860_11/LS_OverView.pdf

Cekiso, M. (2011). Profiling learning style preferences of first-year University students: Implications for course design and instruction, *SAJHE, 25*(7), 1298-1309.

Ciorbea, J. & Pasarica, F. (2013). The study of the relationship between personality and academic performance. *Procedia – Social and Behavioural Sciences, 78*, 400-404.

Coffield, F., Moseley, D., Hall, E., & Ecclestone, K. (2004). *Learning styles and pedagogy in post-16 learning. A systematic and critical review.* London, Learning and Skills Research Centre.

Cohen, A. D. (2010). Focus on the language learner: Styles, strategies and motivation. In N. Schmitt (Ed.), *An introduction to applied linguistics.* (2nd ed., pp. 161-178). London: Hodder Education.

Coleman, L. (2016). Offsetting deficit conceptualizations: methodological considerations for higher education research. *Critical Studies in Teaching and Learning, 4*(1), 16-38.

Contessa, J., Ciardiello, K. A., & Perlman, S. (2005). Surgery resident learning styles and academic achievement. *Current Surgery*, *62,* 344-347

Council on Higher Education. (2010). *Higher education monitor No 9: Access and throughput in South African higher education: Three case studies.* Pretoria: Council on Higher Education.

Council on Higher Education. (2013). *A proposal for undergraduate curriculum reform in South Africa: The case for a flexible curriculum structure.* Pretoria: Council on Higher Education.

Creswell, J. (2007). *Qualitative inquiry and research design.* (2nd ed.). Thousand Oaks, CA: Sage.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative and mixed methods* (3rd ed.). Sage Publications.

Curry, L. & Nunez-Smith, M. (2015). Assessing quality in mixed methods research. In L. Curry & M. Nunez-Smith (Ed.s). *Mixed methods in health sciences research. A practical primer* (pp. 169-197). Thousand Oaks, CA: Sage.

Davidson, C. (2009). Transcription: Imperatives for qualitative research. *International Journal of Qualitative Methods*, 35–52.

de Bilde, J., Vansteenkiste, M., & Lens, W. (2011). Understanding the association between future time perspective and self-regulated learning through the lens of self-determination theory. *Learning and Instruction, 21*, 332-344.

De Boer, H., Donker-Bergstra, A., & Kostons, D. (2012). Effective strategies for self-regulated learning: a meta-analysis. Retrieved from https://www.nro.nl/wp-content/uploads/2014/05/PROO_Effective+strategies+for+self-regulated+learning.pdf

De Zoysa, A., Chandrakumara, P., & Rudkin, K. (2014). Learning and study strategies affecting the performance of undergraduate management accounting students in an Australian university. AFAANZ Conference. Retrieved from:

https://ro.uow.edu.au/cgi/viewcontent.cgi?article=1485&context=buspapers

Du Plessis, A., Muller, H., & Prinsloo, P. (2007). Validating the profile of a successful first-year accounting student. *The South African Journal of Higher Education, 19*(4), 684-698.

Eccles, J.S., & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology, 53,* 109-132.

Effeney, G., Carroll, A., & Bahr, N. (2013). Self-regulated learning: Key strategies and their sources in a sample of adolescent males. *Australian Journal of Educational & Developmental Psychology, 13*, 58-74. Retrieved from:

https://pdfs.semanticscholar.org/8c78/4f3545e253ab59521549c92706e8049125ca.pdf

Fielden, A., Sillence, E., & Little, L. (2011). Children's understandings' of obesity, a thematic analysis, *International Journal of Qualitative Studies on Health and Well-Being*, 6(3), 10.3402/qhw.v6i3.7170

Fleming, N. D. (2001). *Teaching and learning styles: VARK strategies.* Christchurch, NZ: ND Fleming.

Flick, U. (2002). *An introduction to qualitative research.* (2nd ed). London: Sage

Flick, U. (2009). *An introduction to qualitative research* (4ᵗʰ ed). Thousand Oaks, CA: Sage

Gappi, L. (2013). Relationship between learning style preferences and academic performance

of students. *International Journal of Educational Research & Technology, 4*(2), 70 - 76

Garton, B., Dryer, J. & King, B. (2000). The use of learning styles and admission criteria in

predicting academic performance and retention of college freshman. *Journal of*

Agricultural Education, 41(2): 46 – 53

Glonek, J. (2013) Learning styles: Theories and pedagogical strategies. (Unpublished

Master's dissertation). United states Military Academy, West Point, NY

Harber, K.D., Zimbardo, P.G., & Boyd, J. N. (2003). Participant self-selection biases as a

function of individual differences in time perspective. *Basic and Applied Social*

Psychology, 25, 255-264.

Hess, D., & Frantz, J. (2014). Understanding the learning styles of undergraduate

physiotherapy students. *AJHPE*, 6(1), 45-47.

Husman, J., & Lens, W. (1999). The role of the future in student motivation. *Educational*

Psychologist, 34, 113-125

Jackson, T., Fritch, A., Nagasaka, T., & Pope, L. (2003). Procrastination and perceptions of

past, present, and future. *Individual Differences Research, 1*, 17-18.

Jefferson, G. (1984). Transcript notation. In M. Atkinson and J. Heritage (Ed), *Structures of*

Social Action: Studies in conversation analysis. Cambridge: Cambridge University

Press.

Jouhari, Z., Haghani, F., & Changiz, T. (2015). Factors affecting self-regulated learning in

medical students: a qualitative study. *Medical Education Online, 20,* DOI:

10.3402/meo.v20.28694.

Juan, A., & Visser, M. (2015). Home and school resources as predictors of mathematics

performance in South Africa. *South African Journal of Education, 35*(1), 1-10.

Karabenick, S., & Berger, J. (2013). Help seeking as a self-regulated learning strategy. In H. Bembenutty, T. J. Cleary, & A. Kitsantas (Eds.), *Applications of self-regulated learning across diverse disciplines: A tribute to Barry J. Zimmerman* (pp. 237-261). Charlotte, NC, US: IAP Information Age Publishing.

Kim, J. (2015). Effect of family poverty on self-regulated learning ability and academic achievement mediated by school learning activities and private tutoring hours of adolescents. *Advanced Science and Technology Letters, 101*, 55-58.

Kvale, S. (1996). *Interviews: An Introduction to Qualitative Research Interviewing.* Sage, Thousand Oaks, CA

Kvale, S. (2006). Dominance through interviews and dialogues. *Qualitative Inquiry, 12*(3), 480-500.

Letseka, M., & Maile, S. (2008). High university drop-out rates: a threat to South Africa's future. HSRC Policy Brief. Retreived from: http://sayvon.org.za/Document-2717.pdf.

Lincoln, Y. S., & Guba, E. G. (1985). *Emerging criteria for quality in qualitative and interpretive research. Naturalistic Inquiry.* Beverly Hills: Sage Publications.

Long, T. & Johnson, M. (2000). Rigour, reliability and validity in qualitative research. *Clinical effectiveness in nursing, 4*(1), 30-37.

Lowery, (2009). Adapting to student learning styles in a first year electrical/electronic engineering degree module. *Engineering Education Academy*, *4*(1), 52-60.

Maassen, P., & Cloete, N. (2004). Chapter 1: Global reform trends in higher education. In *Transformation in Higher Education: Global Pressures and Local Realities* edited by Cloete, N; Maassen, P; Fehnel, R; Moja, T; Gibbon, T; Perold, H. p7-33

Mahlangu, T. (2016). The academic experiences of Grade 12 top achievers in maintaining excellence in first-year university programmes. (Unpublished Doctoral dissertation). University of Pretoria

McCann, B. (2006). The relationship between learning styles, learning environments, and student success. *Journal of Agricultural Education. 47*(3), 14 - 23.

Mega, C., Ronconi, L., & De Beni, R. (2014). What makes a good student? How emotions, self-regulated learning, and motivation contribute to academic achievement. *Journal of Educational Psychology, 106*(1):121-131.

Merriman, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass.

Moos, D., & Ringdal, A. (2012). Self-regulated learning in the classroom: A literature review on the teacher's role. *Education Research International.*DOI: 10.1155/2012/423284

Muhammad, A. S., Bakar, N. A., Mijinyawa, S. I., & Halabi, K. A. (2015). Impact of motivation on students' academic performance: A case study of university Sultan Zainal Abidin students. *The American Journal of Innovative Research and Applied Sciences, 1*(6), 221-226.

National Commission on Higher Education (1996). *A framework for transformation,* Pretoria: NCHE

Nel, C. (2008). Learning style and good language learners. In C. Griffiths (Ed.), *Lessons from good language learners*. (pp. 49-60).

Newton, N. (2010). The use of semi-structured interviews in qualitative research: strengths and weaknesses. Retrieved from https://www.academia.edu/1561689/The_use_of_semi-structured_interviews_in_qualitative_research_strengths_and_weaknesses

Newton, P. M., & Miah, M. (2017). Evidence-based higher education – is the learning styles 'myth' important? *Front Psychology, 8*, 444 doi: 10.3389/fpsyg.2017.00444

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

Padma, S. (2013). Identifying learning techniques among high achievers. *International Journal of Basic & Clinical Pharmacology, 2*(2), 203-207.

Panadero, E., & Alonso-Tapia, J. (2014). How do students self-regulate? Review of Zimmerman's cyclical model of self-regulated learning. *Anales de Psicologia, 30*(2), 450-462.

Paris, S.G., & Paris, A.H. (2001). Classroom applications of research on self-regulated learning, *Educational Psychologist*, *36*(2), 89-101. Retrieved from: https://pdfs.semanticscholar.org/8501/fda69f5f5eb107705bce601e8a7701570891.pdf

Patrick, H., & Middleton, M (2002). Turning the kaleidoscope: What we see when self-regulated learning is viewed with a qualitative lens, *Educational Psychologist*, *37*(1), 27-39.

Patrick, H., Ryan, A.M., & Kaplan, A. (2007). Early adolescents' perceptions of the classroom social environment, motivational beliefs, and engagement. *Journal of Educational Psychology*, *99*(1), 83-98.

Paulino, P, Sa, I, & Lopes da Silva, A. (2016) Self-regulation of motivation: Contributing to students' learning in middle school. *Electronic Journal of Research in Educational Psychology*, *14*(2), 139-225.

Peetsma, T. (2000). Future time perspective as a predictor of school engagement. *Scandinavian Journal of Educational Research, 44*(2), DOI: 10.1080/713696667

Pekrun, R., Goetz, T., Frenzel, A. C., Barchfeld, P., & Perry, R. P. (2011). Measuring emotions in students' learning and performance: The achievement emotions questionnaire (AEQ*). Contemporary Educational Psychology, 36*, 36 – 48.

Pekrun, R., Goetz, T., Titz, W., & Perry, R. (2010). Academic emotions in students' self-regulated learning and achievement: A program of qualitative and quantitative

research. *Educational Psychologist, 37*(2), 91-105. DOI:

10.1207/S15326985EP3702_4

Petersen, I., Louw, J., & Dumont, K. (2009). Adjustment to university and academic

performance among disadvantaged students in South Africa, *Educational Psychology*,

29(1), 99-115. DOI: 10.1080/01443410802521066

Pintrich, P. (2000). The role of goal orientation in self-regulated learning. Academic press.

Handbook of self-regulation pg 451 – 529.

Pintrich, P. (2004). A conceptual framework for assessing motivation and self-regulated

learning in college students. *Educational Psychology Review, 16*(4), 385-407.

Pintrich, P., Smith, D., García, T., & McKeachie, W. (1991). A manual for the use of the

motivated strategies questionnaire (MSLQ). Ann Arbor, MI: University of Michigan,

National Center for Research to Improve Postsecondary Teaching and Learning

Rahadian, R.B., & Budiningsih, C.A. (2017). What are the suitable instructional strategy and

media for student learning styles in middle schools? *International Journal on

Integrating Technology in Education (IJITE), 6*(4), 25-39.

Reeve, J., Ryan, R., Deci, E., & Jang, H. (2008). Understanding and promoting autonomous

self-regulation: A self-determination theory perspective. In D. H. Schunk & B. J.

Zimmerman (Eds.), *Motivation and self-regulated learning: Theory, research, and

applications* (pp. 223-244). Mahwah, NJ, US: Lawrence Erlbaum Associates

Publishers.

Riessman, C.K. (1993). *Narrative analysis*. London: Sage.

Rivera, J. (2005). Finding Aristotle's golden mean: Social justice and academic excellence.

Journal of Education, 186(1), 79-85

Robbins, S. B., Lauver, K., Davis, H.L., Davis, D., Langley, R., & Carlstrom, A. (2004). Do psychosocial and study skills factors predict college outcomes? *A meta-analysis. Psychological Bulletin, 130*, 261-288.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist*, *55*(1), 68.

Schunk, D & Zimmerman, B. (2008). *Motivation and self-regulated learning. Theory, research, and applications*. Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.

Seabi, J. (2011). Relating learning strategies, self-esteem, intellectual functioning with academic achievement among first year engineering students. *South African Journal of Psychology, 41*(2): 239-249.

Seifert, T. (1993). *Learning strategies in the classroom*. Retrieved from:
https://www.mun.ca/educ/faculty/mwatch/vol2/seifert.html

Sharma, D., & Sharma, S. (2018). Relationship between motivation and academic achievement. *International Journal of Advances in Scientific Research, 4*(1), 1-5. DOI: https://doi.org/10.7439/ijasr

Shelton-Strong, S. J. (2017). From learning styles to learning strategies: Fostering the capacity for learner autonomy. *CELE Journal,* 25, 121-160. Retrieved from:
http://id.nii.ac.jp/1385/00017317/.

Shimabukuro, S., Prater, M., Jenkins, A., & Edelen-Smith, P. (1999). The effects of self-monitoring of academic performance on students with learning disabilities and ADD/ADHD. *Education and Treatment of Children, 22*(4), 387-414. Retrieved from:
https://www.uwyo.edu/wind/_files/docs/echo/past-echo-docs/42899585.pdf

Silverman, D., & Marvasti, A. (2008). *Doing qualitative research: A comprehensive guide*. Thousand Oaks, California: Sage Publications.

Smit, R. (2012). Towards a clearer understanding of student disadvantage in higher education: problematising deficit thinking. *Higher Education Research and Development*, 369-380.

Urval, R., Kamath, A., Ullal, S., Shenay, A., Shenoy, N., & Udupa, L. (2014). Assessment of learning styles of undergraduate medical stundents using the VARK questionnaire and the influence of sex and academic performance. *Advanced Physical Education*, 216-220.

van Zyl-Schalekamp, C., & Mthombeni, P. (2015). Social-background factors affecting the academic success of first year sociology students at the University of Johannesburg, *South Africa Journal of Sociology and Social Anthropology, 6*(1), 31-44.

Vansteenkiste, M., Zhou, M., Lens W., & Soenens, B. (2005). Experiences of autonomy among Chinese learners: vitalizing or immobilizing? *Journal of Educational Psychology, 97*, 468-483.

Vermunt, J. (2005). Relations between student learning patterns and personal and contextual factors and academic performance. *Higher Education, 49,* 205-234.

Watson, V. (2004). Principles of effective practice in supporting students to become self-regulated learners. Paper Presented at NZARE Conference, Turning the Kaleidoscope, Wellington, New Zealand. Retrieved from: http://www.nzcer.org.nz/system/files/14343.pdf

Weinstein, C., Palmer, D., & Schulte, A. (1987). LASSI: Learning and study strategies inventory. Clearwater, Flo.: H & H Publishing.

Williamson, G. (2015). Self-regulated learning: an overview of metacognition, motivation and behaviour. *Journal of Initial Teacher Inquiry, 1*, 25-27.

Wolters, C. (1998). Self-regulated learning and college students' regulation of motivation. *Journal of Educational Psychology*, *90*, 224-235.

Zaleski, Z. (1987). Behavioural effects of self-set goals for different time ranges. *International Journal of Psychology, 22*, 17-38.

Zebardast, A., Ali Besharat, M., & Hghighatgoo, M. (2011). The relationship between self-regulation and time perspective in students. *Procedia – Social and Behavioural Sciences*, *30*, 939-943.

Zimbardo, P., & Boyd, J. (1999). Putting time in perspective: a valid reliable individual-differences metric. *Journal of Personality and Social Psychology, 77*(6), 1271-1288. Retrieved from: https://scienceofbehaviorchange.org/wp-content/uploads/2017/10/TimePerspective.Zimbardo.1999.pdf

Zimmerman, B. J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology*, *81*(3), 329-339. Retrieved from: https://pdfs.semanticscholar.org/e1ff/53e710437e009f06bc264b093a2ba9523879.pdf

Zimmerman, B. (1990). Self-regulated learning and academic achievement: An overview. *Educational Psychologist, 25*(1): 3 – 17. DOI: 10.1207/s15326985ep2501_2

Zimmerman, B. J. (2001) Theories of self-regulated learning and academic achievement: An overview and analysis. In B. J. Zimmerman & D. H. Schunk (Ed.), Self-regulated learning and academic achievement: Theoretical perspectives (2nd ed., pp. 1-38). New York: Lawrence Erlaum Associates.

Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice*,*41*(2), 64-70. DOI: 10.1207/s15430421tip4102_2

Zimmerman, B., Greenberg, D. & Weinstein, C. E. (1994). Self-regulating academic study time: A strategy approach. In D. H. Schunk & B. J. Zimmerman (Eds), *Self-regulation of learning and performance: Issues and educational applications* (pp. 181-202). Hillsdale, New Jersey: Lawrence Erlbaum Associates.

Zimmerman, B. J., & Martinez-Pons, M. (1986). Development of a structured interview for assessing students' use of self-regulated learning strategies. *American Educational Research Journal, 23,* 614-628.

Zumbrunn, S., Tadlock, J., & Roberts, E.D. (2011). Encouraging self-regulated learning in the classroom: A review of the literature. Retrieved from: https://scholarscompass.vcu.edu/cgi/viewcontent.cgi?article=1017&context=merc_pubs

Appendices

Appendix 1: Ethical Clearance for Overarching Study

UNIVERSITY OF ™
KWAZULU-NATAL

INYUVESI
YAKWAZULU-NATALI

12 February 2015

Dr Nicholas Munro 316183
School of Applied Human Sciences
Pietermaritzburg Campus

Dear Dr Munro

Protocol reference number: HSS/0060/015CA
Project title: The student academic exceptionality project: Equity and exceptional academic achievement at the University of KwaZulu-Natal

Full Approval – Expedited Application

In response to your application received on **3** February 2015, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol have been granted **FULL APPROVAL.**

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for **a** period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

....
Dr Shenuka Singh (Chair)
Humanities & Social Sciences Research Ethics Committee

/pm

Cc Supervisor/Project Leader: Dr Siaka Lougue, Annapurna Hazra & Kealoleboga Maruping
Cc Academic Leader Research: Professor D McCracken
Cc School Administrator: Mr Sbonelo Duma

Humanities & Social Sciences Research Ethics Committee
Dr Shenuka Singh (Chair)
Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban 4000

Appendix 2: Gatekeepers Approval

UNIVERSITY OF ™
KWAZULU-NATAL
INYUVESI
YAKWAZULU-NATALI

10 March 2015

Dr Nicholas Munro
School of Applied Human Sciences
College of Humanities
Pietermaritzburg Campus
UKZN
Email: munron@ukzn.ac.za

Dear Dr Munro

RE: PERMISSION TO CONDUCT RESEARCH

Gatekeeper's permission is hereby granted for you to conduct research at the University of KwaZulu-Natal (UKZN), provided Ethical clearance has been obtained. We note the title of your research project is:

"The student academic exceptionality project: Equity and exceptional academic achievement at the University of KwaZulu-Natal".

It is noted that you will be constituting your sample as follows:
- With a request for responses on the website. The questionnaire must be placed on the notice system http://notices.ukzn.ac.za. A copy of this letter (Gatekeeper's approval) together with the ethical clearance must be simultaneously sent to (govenderlog@ukzn.ac.za) or (ramkissoonb@ukzn.ac.za). You are not authorized to distribute the questionnaire to staff and students using Microsoft Outlook address book.
- Interview students, via UKZN staff members who co-ordinate the Golden Key Society on UKZN campuses.
- Access to UKZN data.

You are not authorized to contact staff and students using 'Microsoft Outlook' address book.
Please note that the data collected must be treated with due confidentiality and anonymity.

Yours sincerely

MR BAATILE POO
REGISTRAR (ACTING)

Office of the Registrar
Postal Address: Private Bag X54001, Durban, South Africa
Telephone: +27 (0) 31 260 8005/2206 Facsimile: +27 (0) 31 260 7824/2204 Email: registrar@ukzn.ac.za
Website: www.ukzn.ac.za

1910 - 2010
100 YEARS OF ACADEMIC EXCELLENCE
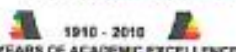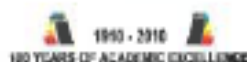
Founding Campuses ■ Edgewood ■ Howard College ■ Medical School ■ Pietermaritzburg ■ Westville

Appendix 3: Ethical Clearance for Current Study

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

02 September 2015

Ms Kate P Surmon 213569818
School of Applied Human Sciences – Psychology
Pietermaritzburg Campus

Dear Ms Surmon

Protocol reference number: HSS/1230/015M linked to HSS/0060/015CA
Project title: Exploring the study methods of high academic achievers at the University of KwaZulu-Natal: Perceptions of self-regulated learning, learning styles, and learning strategies.

Expedited Approval – Class Application
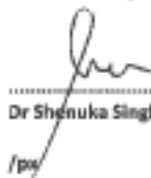
In response to your application dated 27 August 2015, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol have been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. Please note: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

....
Dr Shenuka Singh (Chair)

/px

cc: Supervisor: Dr Nicholas Munro
cc: Academic Leader Research: Professor J Steyn
cc: School Administrator: Ms N Ndlovu

Appendix 4: Letter of Approval for Change in Project Title

UNIVERSITY OF ™
KWAZULU-NATAL

INYUVESI
YAKWAZULU-NATALI

19 October 2018

Ms Kate P Surmon 213569818
School of Applied Human Sciences – Psychology
Pietermaritzburg Campus

Dear Ms Surmon

Reference number: HSS/1230/015M linked to HSS/0060/015CA

Full approval - Change in project title

I wish to confirm that your application in connection with the above has now been granted full approval.

- **Change in project title from** Exploring the study methods of high academic achievers at the University of KwaZulu-Natal: Perceptions of self-regulated learning, learning styles, and learning strategies.
- **New project title:** A qualitative perspective of high academic achievers' self-regulated learning, learning styles, and learning strategies.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach/Methods must be reviewed and approved through an amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number. Please note: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

Best wishes for the successful completion of your research protocol.

Yours faithfully

Dr S Naidoo

/px

cc Supervisor: Dr Nicholas Munro
cc Academic Leader Research: Dr Maud Mthembu
cc School Administrator: Mrs Priya Konan

Appendix 5: Email sent to Golden Key members inviting students to participant

Request for your participation

Dear Student

I am a Research Psychology Master's student at UKZN and am conducting research on high academic achievement for my thesis. I am therefore looking for high academic achievers currently still studying to be participants in my study. You have previously been invited to join Golden Key society and thus qualify as a high achiever. Participation involves a one on one interview that lasts about 40 min. It is very relaxed - I would just like to find out more about how you learn.

The goal of the study is to gain understanding of high achievement so that this information can be used to help those who struggle.

If you are interested in this study and would like to be a participant, please let me know via a response to this email. I have attached an information sheet about the research project.

I would so appreciate your participation!

Kind Regards

Kate Surmon

Appendix 6: Declaration of Informed Consent

Dear Participant

I am a Research Psychology Master's student from the University of KwaZulu-Natal conducting a study which explores the study methods of high academic achievers. The goal of this research is to gain insight into ways in which student academic learning can be enhanced. This study forms part of the requirements for completion of a Research Psychology Master's degree. The study will be published in a thesis that will be available in the UKZN library. The emergent data from this research could also be disseminated in a series of University Teaching and Learning seminars, in conference papers at the annual University Teaching and Learning conferences, at College- and School-specific teaching and learning forums, and may be presented at the 2016 International Conference on Higher Education (scheduled for 9-10 May 2016 in Montreal, Canada).

You are invited to participate in this research, which will involve a one on one interview with the researcher about your study methods and skills. You will be asked relevant questions pertaining to your self-regulated learning, learning style, and learning strategies. The interview should be no longer than 45 minutes to an hour. There are no direct benefits for your participation in this study, however your participation will be greatly appreciated and will assist in informing future initiatives which aim to empower students to be able to enhance their own learning. There are also no risks involved in taking part in this study as the questions and topic are not of a sensitive nature.

Should you decide to participate, you may withdraw at any time without any negative or undesirable consequence to you. This research will adhere to strict ethical guidelines at every stage of the research, such as confidentiality, anonymity, and respect for dignity. Your identity will not be linked to the study in any way and you will remain anonymous.

The interview will be audio recorded and then transcribed. The data that arises from your participation will be entered into a secure database. Data collected during the interview will help answer the research questions. The data will also be presented at conferences and published. In the process of data analysis and the dissemination of findings, your identity will remain confidential. This will be done through the use of pseudonyms.

The audio recordings of the interview will be deleted once it has been transcribed. The transcribed interview will be stored for 5 years in a locked cabinet in the possession of the research supervisor. After a period of 5 years the data will be destroyed.

Should you have complaints, questions or concerns about the study you may contact the researcher, Ms. Kate Surmon (katesurmon@gmail.com). Alternatively you may contact the research supervisor, Dr N. Munro (please find contact details at the end of this form). This study has received approval from the Research Ethics Committee (details of which are at the end of this form).

Should you decide to participate, we ask that you indicate your consent by signing below. Furthermore, your participation will indicate that you have understood and have agreed to the conditions of participation in this study.

Through your participation you are also confirming the fact that you are over 18 years of age and are therefore legally entitled to give your informed consent to participate in this research.

I………………………………………………………………….(full name of participant) hereby declare that I have read and understood the nature and requirements of the study. I have been given adequate information to make an informed decision to consent to participate in the study. I have been given contact details of the researcher, supervisor, and ethics committee. I hereby give my informed consent to participate in this research.

I understand that I am at liberty to withdraw from the project at any time should I so desire, without any negative or undesirable consequence.

SIGNATURE OF PARTICIPANT………………………. Date:………………………….

Declaration of Consent to Audio Recording

I………………………………………………………………….(full name of participant) hereby give my informed consent to have this interview audio recorded. I have been given adequate information to make an informed decision to consent to the audio recording. I am aware of my right to ask for the recording to be stopped at any stage during the interview without any negative or undesirable consequences.

SIGNATURE OF PARTICIPANT………………………. Date:………………………….

Appendix 7: Interview Schedule

1. Section A: Student demographics

1.1 What is your age?

1.2 What course are you studying at the moment?

1.3 What year are you in?

1.4 For how long have you been a member of Golden Key?

1.5 Do you have any previous qualifications?

2. Section B: Self-regulated learning

2.1 Can you explain if and/or how you take control of your own learning?

2.2 Can you explain if goal setting and monitoring your learning is important to your studying?

2.3 How do you motivate yourself to study?

2.4 Can you explain how you manage your time when it comes to studying?

3. Section C: Learning styles

3.1 Can you explain what you understand about the concept of learning styles?

3.2 How would you explain what your learning style is?

3.3 Can you explain how your learning style influences how you study?

4. Section D: Learning strategies

4.1 Could you explain how you study? In other words, what are your study methods and strategies?

4.2 What influences the way you study and your choice of study strategies?

4.3 Do you think the way you study influences your academic achievement?

4.4 What other factors influence your academic achievement?

Thank you so much for your participation. I have no further questions, but is there anything you feel we have left out or anything you would like to add before we end?

Appendix 8: Turnitin Report

Final thesis

ORIGINALITY REPORT

9%	8%	5%	4%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	itstudio.coe.uga.edu Internet Source	1%
2	researchspace.ukzn.ac.za Internet Source	<1%
3	scholar.sun.ac.za Internet Source	<1%
4	etheses.whiterose.ac.uk Internet Source	<1%
5	ro.ecu.edu.au Internet Source	<1%
6	www.selfdeterminationtheory.org Internet Source	<1%
7	Submitted to University College London Student Paper	<1%
8	eprints.qut.edu.au Internet Source	<1%
9	dspace.nwu.ac.za Internet Source	<1%