THE RELATIONSHIP BETWEEN CAREER ADAPTABILITY AND ACADEMIC ACHIEVEMENT IN THE COURSE OF LIFE DESIGN COUNSELLING

by

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Psalm 90:17

Let the beauty of the Lord our God be upon us, and establish the work of our hands for us; yes, establish the work of our hands.

DECLARATION

I, Marica Havenga (28263202) hereby declare that all the resources that were consulted are included in the reference list and that this study is my original work.

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Marica Havenga

August 2011

SUMMARY

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Supervisor	:	**Prof. J.G. Maree**
Department	:	**Educational Psychology**
Degree	:	**M. Ed. (Educational Psychology)**

The purpose of this study was to explore and describe the relationship between top academic achievement in Grade 12 and certain characteristics of career adaptability. The career construction theory and the counselling model for life designing constituted the theoretical framework for the study. This research study of limited scope was conducted according to an interpretivist metatheoretical paradigm. I followed a qualitative methodological paradigm based on a case study design. Purposive sampling was used to select participants according to their top academic achievement. A very important factor in all case studies is the collection of data from multiple sources. Therefore, data collection methods included the Career Adapt-Abilities Inventory, individual interviews, life line and life story. A deductive style of analysis was used to identify themes (concern, control, curiosity, confidence). Inductive analysis was used to identify subthemes. Based on the findings of the study the salient aspects of career adaptability were established as being concern, control, curiosity and confidence. The importance of career adaptability when negotiating change was demonstrated by participants in their orientation and preparation for the future, making decisions after careful planning and exploration, and seeking information, as well as having confidence in their own ability and choices. Finally the findings of my research study suggest a

significant relationship between Grade 12 top academic achievement and certain characteristics of career adaptability. Additionally findings suggest that other variables such as participation in extracurricular activities, gender, race and socioeconomic circumstances should not be excluded and therefore need to be investigated further.

Key words:

- Adaptability
- Career adaptability
- Career construction theory
- Life design counselling
- Academic achievement
- Negotiating change
- Interpretivist paradigm
- Case study
- Qualitative research
- Extracurricular activities

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CHAPTER 1
GENERAL ORIENTATION

CHAPTER 1 - AN OVERVIEW

The primary purpose of Chapter 1 is to provide a general orientation to the framework for this study. In this regard, I firstly elaborate on the rationale and purpose of the study. Secondly I provide the research questions that guided this research study. Thereafter the core concepts are clarified. The reader is then briefly introduced to the theoretical framework and paradigmatic perspective of this study. Furthermore, I provide an overview of the research design and methodology that informed the research process. I introduce the quality criteria used to ensure the rigour of the study and the ethical considerations that informed this study. I conclude this chapter by providing an outline for the chapters that follow.

1.1. INTRODUCTION AND RATIONALE OF THE STUDY

1.1.1 The changing world of work

Society and the world of work are changing and there are notable differences between the traditional and postmodern workplace. In the traditional workplace the organisation was responsible for the individual's career planning and development. Job security was provided, with a job for life. The modern workplace on the other hand can be described as a dynamic, competitive environment, with global, unpredictable markets. The loyalty to an organisation is diminishing and a career is self-managed with the individual investing in employability, which results in him/her taking greater responsibility for his/her career (Baruch, 2004; Thite, 2001 in Schreuder & Coetzee, 2006).

The concept of a "careerquake" as described by Watts (1996 in Patton, 2005) depicts the changes that have occurred and still occur with regard to the construction of a career. The term "careerquake" not only gives an interesting description of what is happening in the world of work, but also implies definite consequences for career counselling. The aim of this study is therefore to investigate the appropriate direction

that career counselling should take in the world where we live in today as well as the importance of career adaptability for negotiating change.

1.1.2 Adaptability: An essential requirement in the world of work

Career adaptability is not a new concept in career psychology. It was already introduced by Super and Knasel (1979 in Langley, 2004; Watson & Stead, 2002) to describe adult career maturity, and a distinction was made between adolescents and adults. The readiness to make effective career decisions during adolescence implies career maturity, whereas the readiness of adults to cope with changing work conditions implies career adaptability. Savickas (1997) argues that career adaptability replaces career maturity as the central construct in the career development theory, indicating that adaptability seems to be a more useful construct. He consequently defines career adaptability as *the readiness to cope with the predictable tasks of preparing for and participating in the work role and with the unpredictable adjustments prompted by changes in work and working conditions* (Savickas, 1997:254).

The concept of adaptability first intrigued me while I was completing my own life line as part of an assignment (in the BOP 804 Career orientation module) to personally experience post-modern techniques for career counselling. I became aware of a pattern of negative experiences every time there was a transition in my life, with the exception of the transition from working life to full-time studying for my Master's degree. I realised that methodical preparation and reliable information had contributed to the latter transition being experienced in a more positive way. As Savickas (2000, in Watson & Stead, 2002:155) puts it, *the only realistic adaptation is to live with change*. Adaptability therefore seems to be an essential requirement in the world of work today.

A study by Hartung, Porfeli and Vondracek (2008) considers career adaptability in childhood. They describe childhood as the time to acquire the fundamental skills of career adaptability, when a child uses countless opportunities to explore and solve problems through play. Childhood signifies a time characterised by developmental tasks, transitions and change (Hartung et al., 2008) and it is acknowledged as a critical period of career adaptability development (Savickas, 2002a; Savickas & Super, 1993; Super et al., 1996 in Hartung et al., 2008).

1.1.3 Academic achievement

Another aspect of great importance during school years seems to be the academic achievement of learners. The Department of Education regularly sets goals and provides financial assistance to ensure better pass rates of Grade 12 learners (Van der Linde, 2005). Seeing that academic achievement results constitute the primary selection criteria for tertiary access, South African universities face new challenges regarding student enrolment. Many students who enrol are not prepared for the demands of the university culture, which causes them to have great difficulty adjusting to the world of tertiary study (Cross & Carpentier, 2009). Again, "adjustment" emerges as an important element of success at tertiary institutions, thus reinforcing the validity of adaptability as a key characteristic at any age.

Many factors impact on South African universities, such as entry standards that are being adapted, programmes that focus on the outcomes that learners are required to achieve, and student populations that are becoming increasingly diverse. Some educators argue that entry standards are the most important determinant of success at university, whereas others feel that other factors also need to be considered (Fraser & Killen, 2003). At the school where I did my internship for Educational Psychology, academic achievement is imperative and top academic achievers are singled out and praised excessively, which further strengthened my interest in this research study.

In reviewing the available literature, it became evident that academic achievement is still regarded as highly important by schools, universities, educators and parents alike, whereas career adaptability is regarded as more important in the domain of career counselling. The concepts of (career) adaptability and academic achievement kept drawing my attention. Since the literature was conspicuously quiet about the relationship between academic achievement and adaptability, I was encouraged to investigate the topic further.

1.2. PURPOSE OF THE STUDY

The purpose of the study is to explore and describe the relationship between top academic achievement in Grade 12 and certain characteristics of career adaptability. These characteristics were identified using the career construction theory and the

counselling model for life designing. Participants were selected at a specific school in Pretoria, based on their academic achievement in Grade 12.

1.3. WORKING ASSUMPTIONS

It is important to state general assumptions that I may hold as part of the working assumptions for the research conducted (Maree & Van der Westhuizen, 2009). Assumptions that I make in regard to this research study will be discussed as follows. Career adaptability entails certain characteristics and these characteristics can be facilitated in childhood and adolescence. Some top achievers in Grade 12 do not succeed at university or tertiary education level because they are not able to adapt to changing circumstances. Lastly, if characteristics of adaptability are demonstrated in other areas of life, career adaptability will also be demonstrated.

1.4. RESEARCH QUESTION AND SUB QUESTIONS

1.4.1 Primary research question

The following primary research question will be explored in this study:

- What is the relationship between Grade 12 top academic achievement and certain characteristics of career adaptability?

1.4.2 Sub questions

In an attempt to understand the above question, the following sub questions will be explored:

- What are the salient aspects of career adaptability?
- How can career adaptability help children and adolescents negotiate career-related transitions?
- To what extent are top academic achievers in Grade 12[1] able to cope with real-life situations after completing their final Grade 12 examination?

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[1] The research will be conducted in one specific public school in Pretoria.

1.5. CONCEPT CLARIFICATION

The following concepts are discussed as clarification for key concepts that feature in my research report.

1.5.1 Adapting

In Latin, 'adapt' means to fit (Savickas, 2008). Adapting therefore signifies an organism changing to become better suited to fit its environment. Adapting involves *executing behaviours that directly produce adaptation* (Savickas, 2008:1). Thus, adaptation is the result of adapting to changing circumstances or an environment.

1.5.2 Adaptability

Adaptability means to fit new or changed circumstances as well as the quality of being able to change without great difficulty. Adaptability further involves *planful attitudes, self- and environmental exploration and informed decision making* (Savickas, 1997:254).

1.5.3 Career adaptability

Career adaptability involves adjusting to work changes that include the mastering of vocational development tasks, dealing with occupational traumas and negotiating job transitions. Characteristics of career adaptability should be viewed as psychosocial self-regulatory competencies that shape adaptation, which then mediates the association between observed work goals and career outcomes such as occupational success, satisfaction and stability. Career adaptability denotes *an individual's readiness and resources for handling current and anticipated tasks, transitions and traumas* (Savickas, 2008:2 & 4).

1.5.4 Self-regulating processes

Self-regulating processes are prompted when goal directedness is needed to cope with tasks, traumas and transitions (Savickas, 2008:3). Developmental tasks, occupational traumas and vocational transitions seem to be the prompting factors for self-regulating processes.

1.5.5 Top academic achievers

According to Swartz (1998 in Van der Linde, 2005), the context in which the term is used, the aim of the study, as well as the researcher's perspective play a role in defining the concept of academic achievement. For the purpose of this study the top academic achievers are those learners who are obtaining top (the best) marks in relation to their peers in their specific subjects, accumulating to top averages by combining all their subject marks in Grade 12. Top academic achievers as referred to will be identified in one specific public school in Pretoria.

1.6. THEORETICAL FRAMEWORK

The postmodern world of work, where globalisation and technological advances have a great impact, poses new challenges for workers and new questions about careers. The career construction theory emphasises that individuals build their careers by imposing meaning on vocational behaviour (Hartung, 2007). The career construction theory realises the goal of offering a comprehensive theory that integrates the segments of the life-span, life-space theory with the developmental perspective on vocational choice and adjustment as initially described by Super (1957; 1990 in Hartung, 2007). Integrating the segments of the life-span, life-space approach is accomplished by attending to four fundamental dimensions of vocational behaviour and their development. These dimensions form the cornerstones of the career construction theory (Hartung, 2007:103):

(1)   Life structure, which comprises the constellation of work and other roles that configure a person's life
(2)   Career adaptability strategies, which entail the coping mechanisms that individuals use to deal with developmental tasks and environmental changes that accrue over their life course
(3)   Thematic life stories, which encompass the motivations, drives and strivings that pattern a life
(4)   Personality style, which constitutes the abilities, needs, values, interests and other traits that characterise a person's self-concept

1.7.   PARADIGMATIC PERSPECTIVE

The research paradigm *serves as the lens or organising principles by which reality is interpreted* (Nieuwenhuis, 2010a:48). According to Denzin and Lincoln (2005), a paradigm consists of the researchers ontological (what is the nature of truth or reality), epistemological (relationship between inquirer and known), and methodological (how can we gain knowledge) premises that guide the researcher's actions. During this research study an interpretivist paradigm guided me.

1.8.   OVERVIEW OF RESEARCH DESIGN AND METHODOLOGY

A meticulous discussion on the chosen research design and methodology follows in Chapter 3, therefore only a summary is included in the next section in order to provide the reader with a clear understanding of my frame of reference for this research study.

1.8.1   Qualitative research approach

A qualitative research approach was employed in this study. Qualitative research is based on a naturalistic approach that seeks to understand phenomena in context or in real-world settings (Nieuwenhuis, 2010a). I aspire to provide a rich description and understanding of the phenomenon that will be studied by employing a qualitative research approach and giving this description thoroughly in Chapter 3 and Chapter 4 (Streubert Speziale & Carpenter in Vivar, McQueen, Whyte & Armayor, 2007).

1.8.2   Research design

I studied a bounded system (Merriman, 1988 in Nieuwenhuis, 2010b), in this case top academic achievers in Grade 12 in a specific high school in Pretoria. My aim was to investigate and describe, rather than make generalisations, thus understanding the participants and phenomenon in great depth.

A collective case study was implemented during this research study (Leedy & Ormrod, 2005). The details of the context surrounding the case was also recorded in order to guide other readers to draw conclusions about the extent to which the findings of this research study may be related to other situations (Leedy & Ormrod, 2005).

1.8.3 Selection of participants

For the purpose of this study a non-probability sampling method was used (Maree & Pietersen, 2010). Sampling was purposive (Maree & Pietersen, 2010). Certain criteria needed to be adhered to, in order to make sure that the participants would be suitable for this study. The research selection of participants was based on top academic achievers in Grade 12 within the school where my internship for the Master's degree in Educational Psychology was completed.

Table 1.1: Participants in this study

Participants	Gender	Population group
1	Female	White
1	Female	Black

1.8.4 Data collection and documentation

In a case study it is important to collect extensive data (Leedy & Ormrod, 2005), therefore multiple methods of gathering data was used. The Career Adapt-Abilities Inventory (Savickas, 2010a) was used as a qualitative measure to identify certain characteristics of career adaptability. Each participant was asked to complete her lifeline. As Fritz and Beekman (2007) indicate, engagement by both the participants and researcher is encouraged from the use of a life line which enables an in dept discussion on the themes and patterns form which the chapters of the life story have been written. Therefore, the individuals were further asked to complete their life stories. Finally an individual interview was also incorporated as a data collection method. The data collected was documented carefully and kept confidential.

1.8.5 Data analysis and interpretation

Data analysis centres around the organisation, interpretation and explanation of the data, which already takes place during the data gathering process (Creswell, 2003). I utilised crystallisation to provide *a complex and deeper understanding of the phenomenon* (Nieuwenhuis, 2010b:81). The chosen data analysis strategy which was

implemented in this research study is based on Creswell's (2003) suggestions. The six steps that emerge are listed next in Table 1.2.

Table 1.2: Steps in the analyses of data in a case study

Step 1	Organisation of the data
Step 2	Reading of data and categorisation of data
Step 3	Starting a detailed analysis of data
Step 4	Identification of patterns, themes and subthemes
Step 5	Discussion of themes and subthemes
Step 6	Synthesis and interpretation of data

Therefore, I allowed the above-mentioned steps to guide my process of analysing the data that was collected. These steps will be discussed in greater detail in Chapter 3 and the findings of the data will be discussed in Chapter 4.

1.9.   QUALITY CRITERIA

Throughout my research study I made every effort to make the study credible and trustworthy (Nieuwenhuis, 2010c). For that reason I strived for quality criteria like credibility, transferability, dependability, confirmability and authenticity (Mertens, 2010; De Vos, 2005b; Babbie & Mouton, 2001). In Chapter 3 I further discuss the strategies I used to ensure rigour in the study.

1.10. ETHICAL CONSIDERATIONS

1.10.1 Confidentiality, privacy and anonymity

I presented the results in an anonymous manner, keeping the identities of the participants' confidential (Hinckley, 2005). All methods of documentation were kept confidential.

1.10.2 Informed consent/assent and voluntary participation

It is imperative for informed consent/assent to be given by participants. Participants were given the opportunity to ask questions, get clarification and raise issues of concern

prior to signing a consent form. A copy of the consent form was given to the participants (Vivar et al., 2007). The nature of the study was explained to participants and the individual was given the choice of participation. Participation should be voluntary (Leedy & Ormrod, 2005), thus explaining to participants that the right to withdraw could be invoked at any time.

1.10.3 Protection from harm

Research participants should not be exposed to unnecessary harm (Leedy & Ormrod, 2005). Participants should be thoroughly informed beforehand about the potential impact of the research (Strydom, 2005). I aimed to be honest, respectful and sympathetic towards all participants. If debriefing was needed after an interview I would be compassionate and provide this, or otherwise make the necessary referral (Hinckley, 2005).

1.11. LIMITATIONS OF THE STUDY

As a research design, a case study was employed. The limitation thereof is thus that findings cannot be generalised due to the small number of participants and settings of the research (Nieuwenhuis, 2010a; Vivar et al., 2007). The purpose and intent of a qualitative research is truly not to generalise, but to provide an in depth description and understanding (Mertens, 2010), consequently not generalisation. As a result the responsibility remains with the reader to determine the appropriateness of the research on his/her current context (Mertens, 2010).

1.12. OUTLINE OF THE CHAPTERS

1.12.1 Chapter 1: General orientation

Chapter 1 provides a general orientation to the study as well as the background and rationale for the study. It includes the research questions and key concepts are clarified. An overview is provided for my selected research design, methodology, and paradigmatic perspective. Furthermore, I briefly introduce the theoretical framework to orientate the reader regarding the framework for this study. Ethical considerations and quality criteria for the rigour of the study is also indicated.

1.12.2 Chapter 2: Theoretical framework

Chapter 2 includes a detailed discussion of the current literature relevant to my study. It explores concepts like adaptability, specifically career adaptability, academic achievement, changes in the world of work, and career counselling. Furthermore the theoretical framework is elaborated on and described in-depth.

1.12.3 Chapter 3: Research design and methodology

Chapter 3 offers a description of the research design, selection of participants, data collection and documentation strategies, as well as data analysis and interpretation. The chapter concludes with an exploration of ethical considerations and quality criteria for the study.

1.12.4 Chapter 4: Research results and discussion of findings

Chapter 4 provides the opportunity to present and discuss the findings of this research study based on the interpretation and synthesis of the qualitative data. Results will be provided in terms of the themes, subthemes and descriptions that emerged during the analysis of the data.

1.12.5 Chapter 5: Conclusion and recommendations

Chapter 5 concludes the research study by providing an overview of the study and the research findings with reference back to the research questions and purpose of the study. Limitations of the study will be discussed and recommendations for further research will be made.

1.13. CONCLUSION

The aim of this chapter was to orientate the reader to the general background and purpose of this research study and indicate the expectations for the information discussed in the chapters that follow. Therefore, an introduction and rationale for the study was provided in this chapter. Furthermore, stating the research question and sub-questions guiding this research study. I described key concepts in my study as well as the research design, methodology and paradigmatic assumptions. Ethical

considerations and quality criteria were introduced, but further discussions follow in later chapters.

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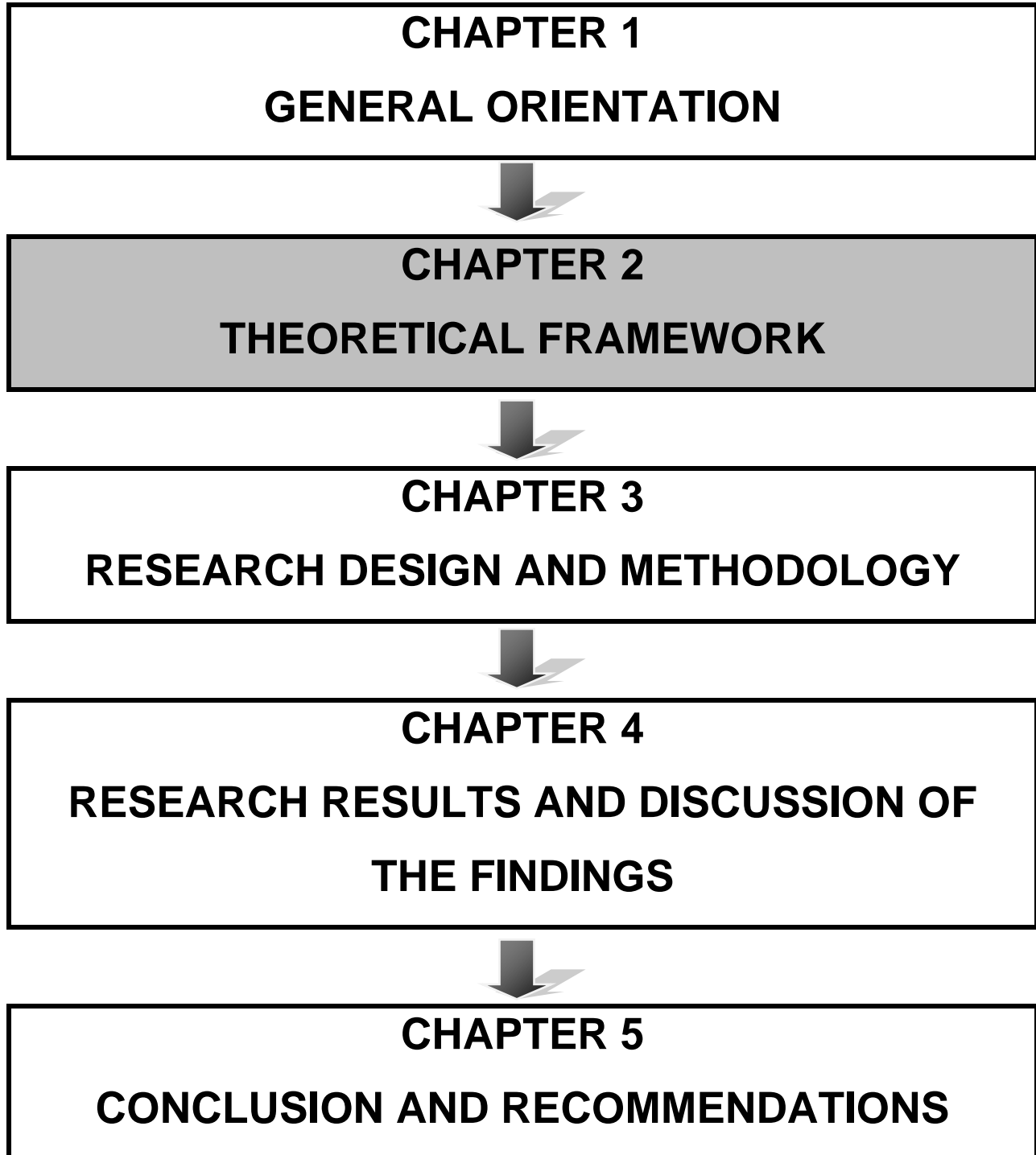
CHAPTER 2

THEORETICAL FRAMEWORK

CHAPTER 2 - AN OVERVIEW

In chapter 2 the focus is on the exploration of the main concepts of my study through an in depth literature review. The significance of conducting the research is discussed. Thereafter, the most important aspects of the study include an explanation of career adaptability, where I considered the move from individual adaptability to more specifically career adaptability. Academic achievement and the relevance to the study are then discussed. I conclude the chapter with a discussion of the career construction theory, also substantiating the move from using traditional career theories in the South African context to using the career construction theory, which forms the theoretical framework of my study.

2.1. INTRODUCTION

2.1.1 Relevance of the study

Various studies regarding diverse aspects of career adaptability have been done focusing on youth in other countries like, Japan (Okano, 2007), Switzerland (Hirschi, 2010), China (Du, 2009) and the United States of America (USA; Savickas, Briddick & Watkins, 2002). This study was conducted within the South African context to add to the body of knowledge already existing on career adaptability. The exploration of the relationship between career adaptability and academic achievement is the main purpose of this research study. In an effort to shed light on why academic achievement was identified as a relevant concept for exploration, the importance of academic achievement is introduced.

Academic achievement is regarded as highly important to all education stakeholders including the South African government, parents, teachers and learners, alike (Department: Education, 2011). This importance was emphasised by the way in which Minister Motshekga (Minister of Basic Education) thanked all education stakeholders for their presence during the announcement of the National Senior

Certificate, Grade 12, examination results, showing that education was a top priority (Motshekga, 2011). Studies from as early as 1960 showed that academic achievement was highly valued (Coleman, 1960) and Yang (2004) stated that academic achievement had been a central topic of discussion amongst educators and researchers for many years. James, Jurich and Estes (2001) asked an important question that is still relevant for many role players, the question on how academic achievement could be elevated. Therefore, exploring academic achievement with relation to career adaptability in particular forms an integral part of this research study. This was done by using non-traditional methods for career counselling, as discussed in the following paragraph.

Various books (Maree, 2007; 2010b; Schreuder & Coetzee, 2006; Stead & Watson, 2004) have been written on career theories with a focus on the South African context. These books represent the move from using traditional career theories exclusively, to incorporating the career construction theory as relevant against the background of the changes being experienced globally and in South Africa, while taking cognisance of South Africa's diverse population.

Maree (2009) argues that career counsellors play an increasingly important role in the career planning process. This is due to individuals needing to become life-long learners in order to remain efficient in a postmodern society characterised by numerous changes. Essentially, then, it is important in the South African context to find out which approach suits the South African population best in order to guide best practice for career counsellors. I agree with Maree (2009) where he contends that a combination of facets of a quantitative approach and career construction postmodern approach is essential in South Africa. Therefore, the career construction approach forms the theoretical framework for this study on life-design counselling.

In the light of global trends and changes, the effect of these changes on careers is explored in the next section, after which career trends in the South African context are described, taking into consideration that South Africa is also affected by global changes. Consequently individuals, who are responsible for shaping their own careers, need to negotiate changes in order to remain effective in society.

2.1.2 The global world of work

Frequent changes in the world of work have become an enduring feature of many organisations (Griffin & Hesketh, 2003). These changes are brought about by technological advances, globalisation, downsizing and economic and political developments. New trends are surfacing, where neat hierarchical structures in organisations rarely exist any longer. Instead, post-modern organisations are without boundaries, functioning with flatter management and employee structures, offering less job security and requiring a single individual to fit into multiple roles or do multiple jobs. This has led to careers having to be shaped more by the individual than the organisation (O'Connel, McNeely & Hall, 2008; Schreuder & Coetzee, 2006). The traditional concept of a *job for life* is consequently dying (Watts, 1996:43) and the expectation is that individuals will make numerous career changes during their lives.

These new trends, as mentioned above, where an individual performs various roles or pursues various careers, are impacting on the *psychological contract* (Argyris, 1960; Herriot, 1992 in Watts, 1996:43) between individuals and organisations. The psychological contract is described by Schreuder and Coetzee (2006:37) as *the mutual expectations and satisfaction of needs arising from the relationship between individual employees and their organisations*.

Accordingly, it is suggested that careers will become more protean as individuals respond to the changing psychological contract. A protean career is described as a career managed by the individual not the organisation, based on the varied experiences in training, educational level and occupational fields of the individual (Hall & Mirvis, 1995). Since career changes have become increasingly more evident in any individual's life, due to changes in the world of work, it is important to realise that multiple changes will be the rule and not the exception (Ebberwein, Krieshok, Ulven & Prosser, 2004).

2.1.3 The South African world of work

In South Africa the world of work is not different from that of other countries. The first democratic election in April 1994 brought about a major change in the composition of the labour force. The implementation of the Employment Equity Act (Act 55 of 1998) has changed the face of the South African workforce significantly. Different generations

working together, the impact of HIV & AIDS, more women entering the workforce, dual-career families and many other factors affect most South Africans (Schreuder & Coetzee, 2006). Another significant factor contributing to the changes experienced in the South African working environment is the unemployment rate. The unemployment rate is described as follows by the International Monetary Fund from the World Economic Outlook Database:

Table 2.1: South Africa unemployment rate

South Africa unemployment rate	2005	2006	2007	2008	2009	2010
Percent of total labour force	26,727	25,542	22,689	21,860	24,301	24,8

(Adapted from the International Monetary Fund, World Economic Outlook Database, 2010)

The information in Table 2.1 indicates that there has been a decline in the unemployment rate from 2005 to 2010. Even though a decline is indicated it is still significant to mention the unemployment rate because it is persistently high. Unemployment together with the economic recession experienced world-wide and in South Africa (Marais, n.d.) proved punishing to South Africa with the loss of jobs being intensified. Further it is worth mentioning that almost half of all people below the age of 25 who can work were unemployed in 2010 (Department: National Treasury, 2011).

According to Van Aard (1999, in Schreuder & Coetzee, 2006) it is expected that the number or informal sector contracts and casual work opportunities in South Africa will increase significantly in future, beyond the demand for more permanent formal-sector employees. Van Aard made the above-mentioned prediction 12 years ago, but this prediction is currently confirmed by the National Budget 2011/2012 that is investing R70 billion in the creation of short term job opportunities rather than permanent job prospects (Department: National Treasury, 2011). Consequently, many individuals in South Africa will be changing jobs often and seeking various jobs or career opportunities during the course of their lives.

2.1.4 Individual responsibility for career planning

Even though changes in the world of work are currently prominent, the following advertisement already appeared in the mid-nineties on the notice board of a company that was experiencing lay-offs (Hall & Mirvis, 1995a in Schreuder & Coetzee, 2006:35):

> *We can't promise you how long we'll be in business.*
> *We can't promise you that we won't be bought by another company.*
> *We can't promise you that there will be room for promotions.*
> *We can't promise that your job will exist until you reach retirement age*
> *We can't promise that the money will be available for your pension.*
> *We can't expect your undying loyalty and we aren't sure we want it.*

This advertisement was specifically placed to inspire individuals to take control of their own careers. In the modern world of work, where the organisation is no longer responsible for career development and less job security is provided, it has been proven that it is an individual's own responsibility to manage his/her career, improve his/her skills and remain employable (Schreuder & Coetzee, 2006).

Savickas (2000, in Watson & Stead, 2002) and Watts (1996 in Patton, 2005) warn that, since workers are becoming increasingly responsible for managing their own careers, workers must improve their skills throughout their lives and become more flexible and adaptable within the work environment. Individuals consequently must be adaptable, competent, life-long learners to navigate career transitions in this turbulent, ever-changing environment (Hall & Chandler, 2005). The challenge is to remain employable, and therefore the individual needs to expect change, prepare for change and adapt to the changing circumstances of the working world. Adaptability seems to be a key requirement for current and future employees.

2.1.5 Negotiating change

Due to changes occurring at a rapid pace, it is important to find out why researchers often mention adaptability as a key characteristic of an individual in negotiating change. The Minnesota Theory of Work Adjustment (TWA; Dawis & Lofquist, 1984 in Griffin & Hesketh, 2003) proposed that a good match between environmental requirements and individual skills, knowledge and abilities results in satisfactory performance and

personal satisfaction. Figure 2.1 summarises the basic components of The Minnesota Theory of Work Adjustment.

Figure 2.1:   Diagrammatic representation of The Minnesota Theory of Work Adjustment
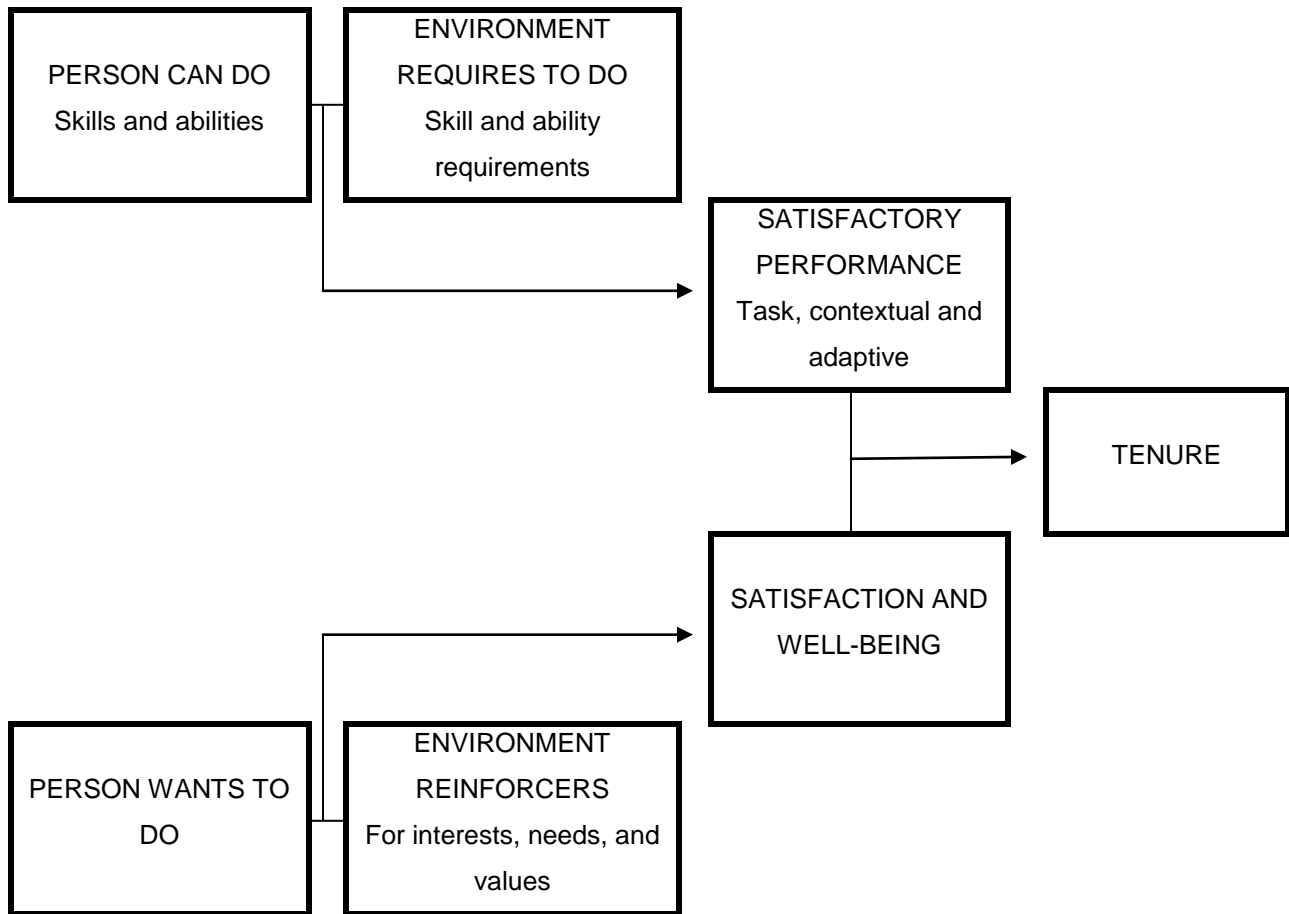
(Griffin & Hesketh, 2003:66)

According to the above-mentioned theory, change on the other hand often results in a mismatch between the environment and the individual, because the individual's skills, knowledge and abilities no longer correspond to the changed requirements of the environment, which leads to dissatisfaction. Therefore in order for satisfaction and well-being to be restored again, adaptation is necessary (Griffin & Hesketh, 2003).

The TWA seemingly correlates with the trait-factor approach (Parsons, 1909 in Schreuder & Coetzee, 2008) that fits or matches an individual to an occupation. Even though the argument for the current research study is to move away from the trait-factor approach, what is important is that Griffin and Hesketh (2003) propose that the match or mismatch indicated by the TWA calls for something to happen. It is proposed that change creates a demand for adaptation. Where Griffin and Hesketh (2003) base their work on the TWA with a focus on fitting, this research study will move away from the concept of fitting and rather focus on career adaptability as part of career construction to negotiate changing circumstances. As a result the term adaptability will be explained in more detail in the next section.

2.2. ADAPTABILITY

2.2.1 The expectation of change

The following statement: "*change is a fact of life*" (Mumford, Baughman, Threlfall, Uhlman, Costanza, 1993:241) indicates that individuals should be expecting change and adapt to these changes. Adaptability, as described by Van Vianen, De Pater and Preenen (2009) denotes that individuals modify their behaviour according to circumstances that are changing, thus becoming adapted to the new circumstances. Adaptability then is vital if changes are occurring in the different areas of life and exploring adaptability and its meaning seems to be relevant and important.

People respond differently to change. Therefore the question arises for many individuals, employers and specifically career counsellors why some individuals suffer, when faced with change and chaotic circumstances, while others cope so well and even flourish (O'Connell et al., 2008).

2.2.2 Moving from individual adaptability to career adaptability

Adaptability is defined as the ability of an individual to negotiate new or changed circumstances (Savickas, 1997). Individual adaptability, as proposed by Morrison and Hall (2002, in Hall & Chandler, 2005:163) is a person's *capacity to change, including both the competence and the motivation to do so*. In a world characterised by frequent career transitions, individuals are confronted with a variety of unfamiliar situations and

are expected to be capable of responding to these changes with success (Hall & Chandler, 2005).

The focus of the study is more on those changes experienced in the world of work that require specific characteristics and kinds of behaviour to constitute adaptability within the workplace while changing jobs or careers. Adapting to the changes experienced by individuals when changing careers is thus better described as career adaptability, which is further explored in the following section.

2.3.   CAREER ADAPTABILITY

2.3.1   Moving from career maturity to career adaptability

As indicated in Chapter 1, career adaptability is not a new construct. Career adaptability was already introduced by Super and Knasel in 1979 (in Langley, 2004; Watson & Stead, 2002). They made a distinction between career maturity, which focused on the readiness to make career decisions in adolescence, and career adaptability indicating adults' readiness to cope with changing work conditions.

Savickas (1997) has moved away from making a distinction between maturity and adaptability. He proposes an integration of the four perspectives of the life span/life space approach as initially described by Super (1957, 1990 in Hartung, 2007; Savickas, 1997) through career adaptability. Career adaptability then becomes a relevant term, because it connects to all four the perspectives of the life span/life space theory, namely (1) the individual differences perspective, (2) the phenomenological perspective, (3) the developmental perspective, and (4) the contextual perspective (Hartung, 2007; Savickas, 1997). Career adaptability is defined as *the readiness to cope with the predictable tasks of preparing for, and participating in the work role and with the unpredictable adjustments prompted by changes in work and working conditions* (Savickas, 1997:254).

2.3.2   The importance of career adaptability during adolescence

Different process theories (Ginzberg 1951, Super, 1992, Tiedeman, O'Hara & Miller-Tiedeman, 1963, 1990 in Schreuder & Coetzee, 2006) propose that certain developmental milestones are reached at certain ages and certain career choices relate

to that age group. Hirschi (2010:229) made use of Ginzberg's theory that indicated that *adolescents are in the exploration stage, with a progressive narrowing of career options from identifying tentative options to making final decisions regarding career choice*. The concept of making a "*final"* career decision is contradictory to what is proposed when reviewing relevant literature through this research study. In this study the literature indicates the importance of changes that are occurring globally as well as in South Africa and the consequences these changes have on career decisions. Essentially, then, adolescents do not make a final career choice at this stage, but only one of an inevitable variety of choices.

The importance of career adaptability during adolescence is emphasised by Van Vianen et al. (2009), signifying the negative experiences of young people making career choices. On the other hand Creed and Fallon (2008) propose a more positive view on adolescents' concerns when making a career decision, indicating that concerns could be reduced when adolescents' were to behave in ways that are associated with the characteristics of career adaptability. The participants in this research study are both in the adolescent developmental stage. Therefore, career adaptability is further explored as relevant to the diminishing occurrence of finality in making a career choice and the positive contribution of behaviour to the adolescent's compliance with characteristics of career adaptability.

2.3.3 Exploring the relevance of career adaptability

Swanson and Parcover (1998, in Rottinghaus, Day & Borgen, 2005:5) state that career adaptability is a *useful construct for examining what it is that career practitioners do, and what they will need to do in future, given the changing structure of work.* Bimrose (2010) suggests that, during career transitions, career adaptability appears to be beneficial in the coping process. Therefore, the argument of using career adaptability has constantly proved to be relevant for the expectation of change that has become a reality in life.

Langley (1999 in Watson & Stead, 2002, p. 159) explores career adaptability as part of five developmental tasks that need to be accomplished in choosing and maintaining a career referring to *career adaptability, positive uncertainty, change*

management, lifelong learning and personal agency. Langley (1999 in Watson & Stead, 2002) further mentions that these developmental tasks involve seeking for information, for example about the self and about occupations, the integration of these two types of information, and the acquisition of planning and decision-making skills to act on the gained information.

These developmental tasks certainly are in accord with what has been stated above about how the world of work is changing, how individuals are responsible for their own careers and how individuals should prepare for the changes they will be facing. It further concords with Savickas's proposition of adaptability that involves *planful attitudes, self- and environmental exploration and informed decision-making* (Savickas, 1997:254).

The above-mentioned skills seem to be in further agreement with what Savickas (2008) proposes as transitional approaches, so that individuals may adapt more effectively to changes. He argues that seeking information is vital, after which an informed decision is taken; different behaviours are explored; a stable commitment is made for a certain period of time; the role being fulfilled at that time is managed, and eventually the individual has to disengage. Certain characteristics seemingly need to be displayed for career adaptability to be successfully demonstrated by an individual. These characteristics are discussed as follows.

2.3.4 Characteristics for career adaptability

These characteristics, as mentioned above, are determined through distinct **a**ttitudes, **b**eliefs and **c**ompetencies (referred to as the career construction **ABC**'s) that shape the actual problem-solving strategies and coping behaviours of individuals to synthesise their vocational self-concepts with work roles (Savickas, 2008; Savickas, 2005b in Hartung, 2007). The ABC's are grouped into four dimensions of adaptability, namely *concern*, *control*, *curiosity* and *confidence.* These four dimensions represent resources for self-cultivation (Savickas, 2008). Table 2.2 contains various aspects of each of the four dimensions of adaptability.

Table 2.2: Dimensions of adaptability

Adaptability dimension	Career question	Attitudes & beliefs	Compe-tence	Career problem	Coping behaviours	Relationship perspective	Career intervention
Concern	Do I have a future?	Planful	Planning	Indifference	Aware Involved Preparatory	Dependent	Orientation exercises
Control	Who owns my future?	Decisive	Decision making	Indecision	Assertive Disciplined Wilful	Independent	Decisional training
Curiosity	What do I want to do with my future?	Inquisitive	Exploring	Unrealism	Experimenting Risk-taking Inquiring	Inter-dependent	Information-seeking activities
Confidence	Can I do it?	Efficacious	Problem solving	Inhibition	Persistent Striving Industrious	Equal	Building of self-esteem

(Savickas, 2005b in Hartung 2007:110)

Career adaptability is represented as an aggregate construct, not as a latent construct (Hirschi, 2009; Savickas, 2008). The distinction is that in a latent construct the perception is that the construct exists on a higher-order level underlying the single measure indicators. On the contrary, an aggregate construct is formed by the combination of its single measure indicators (Law, Wong & Mobley, 1998 in Hirschi, 2009), thus, representing the unique and shared variance of the measures (Savickas, 2008).

Therefore, the combined level of the four dimensions of career adaptability and not their shared variance seems to be the appropriate way to conceptualise and measure the multidimensional construct of career adaptability (Hirschi, 2009). For that reason career adaptability is represented as an aggregate construct composed by its dimensions, not a latent construct reflecting in its dimensions (Savickas, 2008).

2.3.5 Confirming why career adaptability matters

Various authors suggest that several career changes will occur over an individual's life-time. Muller (1999 in Maree & Beck, 2004) and Naicker (1994 in Maree & Beck, 2004)

suggest that the five career changes fall into this category. Savickas et al. (2009) refers to a study in the United States of America (US) that indicated that an average of ten career changes may occur for individuals up to age 36. Even though the number of times varies, and the aforementioned study was done in the United States of America, it indicates that the general trend is for individuals to change jobs regularly (Bimrose, 2010; Maree, 2009).

At present careers previously thought of as secure within an organisation have been affected by global changes and consequently have left individuals in similar careers insecure and anxious (Sullivan, 1999 in Ito & Brotheridge, 2005). Expecting changes in careers is supported by reviewing the relevant literature (as indicated above), that clearly indicates that individuals need to adjust to having numerous careers in the course of their lives. Bimrose (2010) emphasises accordingly that being able to deal with transitions successfully over a life-time is important. Ito and Brotheridge (2005) for the same reason recommend that career adaptability enhances employability, reduces anxiety and causes individuals to cope well when changes do occur. Savickas (2000, in Watson & Stead, 2002) proposes that the only realistic expectation is change and one's adaptation to change. The importance of career adaptability is therefore clearly confirmed.

2.4. ACADEMIC ACHIEVEMENT

2.4.1 The correlation between career adaptability and academic achievement

Various studies have investigated behaviour patterns and/or the characteristics that may constitute career adaptability. The results of these studies have argued consistently that academic achievement contributes positively to career adaptability. To clarify the importance of academic achievement relating to career adaptability, these studies will be discussed briefly.

One study investigated the factors influencing adaptability in school. As part of this study Zhou (1991, in Du, 2008:22) explains that *school adaptability is the individual inclination to overcome difficulties and to obtain relatively good academic performance*. This clearly relates adaptability to academic achievement during school years. A study with college students suggests, as part of the study, that intelligence (as proved through

academic achievement) forms a significant part of people's ability to adapt to changing circumstances by learning from experience to maintain performance, which explains why some people cope better with change than others (Mumford et al. 1993).

Another study within the world of work found that adaptability is a key competency for career success. In order to arrive at this conclusion, O'Connell et al. (2008:251) created the hypothesis that *education level will be positively related to personal adaptability*. This hypothesis was based on reviewing prior research that had shown that formal and experience based learning affects adaptability. During their investigation it was found that higher levels of education contribute to cognitive complexity, which in turn increases the ability to navigate changing circumstances. This research study proved that educational level is positively correlated to adaptability. In the light of the above mentioned findings in various studies, I regard academic achievement and adaptability as important aspects in navigating career changes.

Together these studies have, therefore, provided encouragement to investigate the relationship between career adaptability and academic achievement in greater depth. Many South Africans do not have access to scientifically researched information like the above-mentioned studies, but still, unsurprisingly the importance of academic achievement is emphasised by educational role players (like, teachers, parents and adolescents). The question then arises, where this belief of parents, teachers, the Department of Education, adolescents and other role players originates and why so many resources are invested in ensuring academic achievement, specifically regarding learners in Grade 12? Hence, this belief will be investigated further.

2.4.2 Global belief in the importance of academic achievement

A central issue in educational institutions and for educational role players is the prediction of academic achievement. Consequently, the prediction of academic achievement has been mostly associated with intelligence (Furnham, Chamorro-Premuzic & McDougall, 2003). Intelligence is subsequently defined by academic excellence during formal schooling as measured by assessment scores (Rohde & Thompson, 2007). Society's focus on academic achievement as displayed during formal schooling, leads to educational role players' perception that academic achievement

allows for entrance into tertiary institutions that in turn correlates with accomplishment in a traditional academic profession (Maree, 2011; Money Instructor, 2009; Watts, 1996). Therefore, academic achievement seemingly correlates with the concept of success. In this study the conceptualisation of success refers to numerical scores of a student's knowledge (Kobal & Musek, 2001). Various comparative studies have been done between countries on academic achievement of learners (The PIRLS Study by Mullis, Martin, Kennedy & Foy, 2007, the Third International Mathematics and Science Study in 1995, the Third International Mathematics and Science Study — Repeat (TIMSS-R) in 1999, and the Trends in Mathematics and Science Study done in 2003 as indicated in Van der Walt, Maree & Ellis, 2008), signifying the importance for almost all countries of academic achievement.

Educational role players' focus on numerical scores, pass rates and top academic achievement is strengthened by the South African Government that focus extensively on the Grade 12 pass rates (Department: Education, 2011). The focus on academic achievement is additionally strengthened by the consideration of the results from the national examination in Grade 12 as the main determinant for entry into tertiary institutions in sought-after fields of study (Maree, 2009; Sibaya & Sibaya, 1997 in Maree, Aldous, Hatting, Swanepoel & van der Linde, 2006). In the following section the focus is shifted from a global perspective to the South African perspective as relevant to this research study.

2.4.3 The South African Government encourages academic achievement

The South African government invests large amounts of money in the educational system. Education has already received the largest share of our country's budget over a number of years. In the budget of 2011/2012 it was no different, as indicated below by Figure 2.2 created to visually represent expenditure within the 2011/2012 budget.

Figure 2.2: Expenditure in the 2011/2012 budget
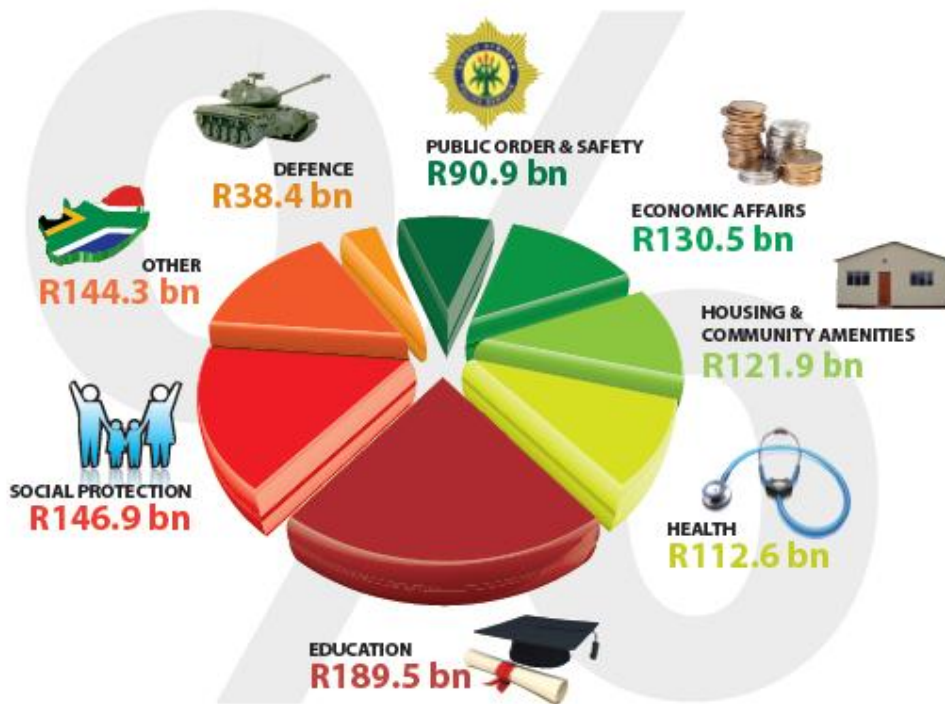
(Department: National Treasury, 2011:2)

The Gauteng Department of Education developed a newsletter that each school in Gauteng received after the beginning of the school year in 2011. In this newsletter statistics were released on the pass rates during the 2010 Grade 12 final examination. In addition the newsletter specifically indicated that the pass rate of Grade 12 learners had increased by 6,8% from 71,8% in 2009 to 78,6% in 2010. Top academic achievers were especially acknowledged and congratulated. A ceremony was even held to honour the Grade 12 top achievers in Gauteng where the Department of Education offered bursaries to all the top performing learners to study at a university of their choice (Department: Education, 2011). This newsletter emphasised the importance of academic achievement during the Grade 12 final examination.

The letter further stated that Bachelor degree pass rates at universities have increased from 29,3% in 2009 to 33,9% in 2010, where 43% the of learners who passed Grade 12 had obtained a Bachelor degree in 2010 (Department: Education, 2011).

Grade 12 results remain the determining factor with regard to university admission (University of Pretoria, 2011). A further explanation on university entry requirements is discussed, contributing to the belief that academic achievement is associated positively with entry into a university, which further provides career opportunities.

2.4.4. Educational institutions and parents value top academic achievement

The determining factor for entry requirements for admission to programmes at universities in Gauteng, constitutes academic achievement in the final examinations in Grade 12 (Maree, 2011; University of Johannesburg, 2011; University of Pretoria, 2011; University of the Witwatersrand, 2011). The University of Pretoria (2011) at the same time cautions prospective students that achieving minimum requirements does not necessarily guarantee admission. Additionally, bursaries are offered to prospective students who are top academic achievers.

To help me understand how relevant academic achievement is at university level, I refer to information from a study by Jansen, Tabane and Sehlapelo (2010) that indicates that the University of Pretoria (UP) attracts many students who are top academic achievers. UP subsequently has high progression and pass rates, which may be attributed to the high academic entry requirements, as well as the top academic achievements of the students who enrol at UP.

As career competition grows fiercer in the working world, parents and other role players in the school environment considers it as very important for learners to do well at school. Parents care highly about their children's academic performance, because it is believed that this will ensure a wider range of choices and better chances for entering universities and the world of work (Bell, 2008).

2.4.5 Adolescents regard academic achievement as important

Research by Jansen et al. (2010) highlights the huge gap between academic expectations at university level and demands at school level. The researchers further contend that students from top schools as well as rural schools emphasise that they have to adjust quickly to the changing demands. Otherwise academic achievement is greatly compromised, leading to anxiety and fear of failure.

Zhang, Zhao and Yu (2009) suggest in their study that non-achievers experience their low achievement as negatively effecting peer relationships. The literature review in the above-mentioned study proposes that adolescents with low academic achievement are more likely to experience social problems such as rejection, neglect and unpopularity amongst peers (Dodge, Coie & Brakke, 1982; Bakker, Denessen, Bosman, Krijger & Bouts, 2007 in Zhang et al., 2009). In the light of the information gained from the various aforementioned studies I conclude that academic achievement is just as important to the South African community as the global community, the Department of Education, universities, schools, teachers, parents, and adolescents.

2.5.   TRADITIONAL CAREER COUNSELLING THEORIES

2.5.1   A view of careers, jobs and career counselling

Traditionally the view was taken that moving from school, to university, to the working environment was the time of making a single career choice (Van Vianen et al., 2009). Then the corporate ladder was climbed through hierarchical structures, job security was provided by the organisation and loyalty to an organisation promised lifelong employment (Schreuder & Coetzee, 2006). People entering the world of work in such a manner were considered to have careers, while the rest simply had jobs (Watts, 1996). Career counselling was provided to sort out which students were to have careers and which were to have jobs (Watts, 1996), consequently facilitating the transition between education and work (Patton, 2005).

Furthermore, career counsellors who rendered career counselling predominantly based their services on methods, theories and techniques with proven validity. These methods, theories and techniques were organised into psychometric tests and applied to all individuals for career intervention (Savickas, 2010b). Psychometric tests and inventories were treated as *crystal balls* (Perry, 2010:11) and occupational satisfaction was predicted by making choices based on the results of these instruments.

2.5.2   Career counselling in the diverse South African context

In the South African context, the validity of psychometric assessment media used or career counselling is mostly based on white Afrikaans and English-speaking South

Africans (Maree, 2009; Stead & Watson, 2004), thus disregarding the diversity and richness of the South African population. According to Kuit and Watson (2005), the use of career counselling methods based on western theories in the South African context may well marginalise many individuals who come from a culturally diverse context that differs from the western context. Maree (2009:444) voiced the concern that using psychometric assessment media based on the USA population is *at best, inappropriate and, at worst, potentially dangerous* if applied to the South African population.

Given that job markets are requiring a constant improvement of knowledge and skills, career counsellors play an increasingly important role in guiding their clients to negotiate change within their careers (Maree & Beck, 2004). Career choices are (or will be) made numerous times during the course of a lifetime (Savickas et al., 2009; Muller, 1999; Naicker, 1994 in Maree & Beck, 2004; Watts, 1996). Career counsellors need to respond to changes occurring in the world of work as well as within the diverse South African population, consequently, career counselling practice has been brought to a crossroads (Maree & Beck, 2004). Career counsellors need to examine various career theories and decide which theory or approach to career counselling is best suited for the individual client entering career counselling and the South African population at large.

Due to limitations in their training, many career counsellors focus on western (USA) tenets of career counselling that are often ineffective within the diverse population of South Africa (Maree, Ebersöhn & Molepo, 2006). Considering differences in language, religion, socio-economic status and educational background, career counsellors are cautioned that assessment measures developed for one population group are often not reliable and valid for another population group (De Bruin, 2001). Furthermore, career counsellors often tend to adopt the expert role where the individual then has little input and is consequently disempowered in making a career choice (Bischof & Alexander, 2008; Maree & Beck, 2004). It is therefore proposed that, in the postmodern era and within diverse settings, career counsellors need to consider other approaches or theories that are not based primarily on westernised, white societies or population groups.

2.5.3 Various perspectives on career counselling

Van Vianen et al. (2009) argue that traditional career theories are no longer adequate if used in isolation to address the various needs identified during career counselling. Maree (2009) emphasises the importance of reviewing career counselling in South Africa due to the fact that it was based on movements in the USA. Maree and Van der Westhuizen (2011) suggest that career counselling in South Africa should reflect the current reality of the South African population. Maree et al. (2006) warn that career counselling services are still mainly available to privileged South Africans. They also indicate that career counsellors are still using psychometric assessment media that are not representative of the different cultural groups in South Africa.

The authors referred to above all concur with Savickas (1993), who suggested that the quest is for an approach that keep up with changes in society and for career counselling to keep up with the demands of the postmodern era. Savickas (1993) suggested six innovations for career counselling:

- *No more experts* (Savickas, 1993:211). Where career counsellors were previously regarded as experts, it is now proposed that a move be made towards affirming clients as agents playing a vital role in their own career counselling and having the best knowledge of themselves, their lives and their needs.
- *Enable rather than fit* (Savickas, 1993:211). Thus, individuals may no longer be fitter to preset criteria, but should be enabled to draw up their own life plan and add their own meaning to events and experiences in their lives.
- *Rewrite the grand narrative* (Savickas, 1993:211). Each individual has his/her own life story. Therefore one grand narrative is not applicable to all people. The work-role is also viewed within a constellation of life-roles, where the individual determines the importance of each role and writes his/her own life story.
- *Career is personal* (Savickas, 1993:212). Career is viewed from a subjective perspective because it is very personal to any individual. The move is away from interventions that objectively fit an individual to a career, to increased emphasis on personal meaning and the subjective view of the career.
- *Career development theory is not counselling theory* (Savickas, 1993:212). The counsellor to whom the individual comes for career counselling does therefore

not use objective guidance techniques in isolation, but co-construct meaning together with the client, in order to make decisions and structure careers.

- *Stories rather than scores* (Savickas, 1993:213). Intervention is redirected from scores towards stories, where the individual's subjective career is addressed through stories. Comprehensive career counselling attends to both the objective and subjective meaning of careers.

Based on Savickas's six innovations and the suggestions made by the authors in the introductory section (concerning various perspectives on and the importance of new initiatives for career counselling in South Africa), it is important to review the different perspectives. Table 2.3 lists three perspectives on career assessment: individual differences, individual development and individual design.

Table 2.3: Three perspectives on career assessment

Career intervention perspective	Individual differences: fitting self to environment	Individual development: fitting work into life	Individual design: constructing narratives
General model for intervention	Vocational guidance model	Career education and counselling	Life design intervention
Emergence	Early 20th century First wave	Middle 20th century Second wave	End 20th century Third wave
What the theory examines	The content of vocational personality types	The process of psychosocial adaptation	The dynamics by which life themes impose meaning on vocational behaviour
Main goals	• Enhance self-knowledge • Increase occupational information • Match self to occupation	• Assess development status • Orient the individual to imminent developmental tasks • Develop the attitudes, beliefs and competencies needed to master these tasks	• Construct career through small stories • Reconstruct the small stories into a large story or identity narrative • Co-construct the next scenario in that life portrait
Major career-choice theories	• Trait-and-factor approach (F. Parson) • Roe's theory	• Ginzberg's theory • Super's theory • Tiedeman, O'Hara &	• Creating narratives based on Narrative Therapy

	• Holland's theory • Bordin's theory • Dawis & Lofquist's theory • Krumboltz's theory • Hackett & Betz's theory • Brown's theory	Miller-Tiedeman's theory	• Contextualisation of career development • Existential career counselling based on Frankl's Logotherapy
Main questions to be answered	What traits does the student possess and in what environments will those traits fit best? What do different people prefer to do?	How do students use what they possess and fit work into the context? How do individuals cope with vocational development tasks, occupational transitions and work traumas?	Why do individuals fit work into their lives in distinct ways? Why do students move in the direction that they do and how can they use education and work in a way that is meaningful to them and matters to society?
Limitations	▪ Clients are reduced to objective test scores ▪ Lack of recall of test results later in life ▪ Due to low vocational identity or lack of a clear and stable self-concept clients lack readiness to understand or benefit from results		
Benefits	• Works well with clients who know themselves really well and possess a relatively clear sense of identity	• Works well with variety of clients • Beneficial for clients who lack a clear sense of identity and readiness to make a career choice	• Works well with clients who lack a sense of personal identity and do not feel in control of their own career decisions • Beneficial for clients who are low in confidence about ability to plan their own life-career direction

(Adapted from Hartung, 2010a; Maree, 2009; Savickas, 2010b; Schreuder & Coetzee, 2006)

Maree and Van der Westhuizen (2011) indicate that applying (for instance) the trait-factor approach in isolation during career counselling to fit an individual to an

occupation is not appropriate for the diverse South African population. An approach is needed that incorporates elements of both the positivist, quantitative approach and the constructivist, qualitative approach (Maree & Van der Westhuizen, 2011). The positivist, quantitative approach focuses on scores, whereas the constructivist, qualitative approach bases career counselling on stories. According to Hartung (2009), using both approaches can greatly enrich the process of career counselling.

Considering the various perspectives and methods mentioned above and indicated in Table 2.3, Hartung (2010a) concluded that career construction is a way to combine both scores and stories. Based on all the information mentioned above, the career construction theory is especially relevant and constitutes a theoretical framework for the current research study of career adaptability. It also corresponds with Hartung's (2010a) conclusion that a combination of scores and stories guide career assessment practitioners best in gathering information about *students' personal traits and life themes to improve their self-knowledge and promote their life-career planning, decision making, choice and adjustment* (Hartung, 2010a:3). By answering all the main questions of each specific approach (*what, how and why*), career construction theory seeks to be comprehensive in its *purview* (Savickas, 2006:3). Career construction theory is further discussed in more detail in the next section.

2.6.   CAREER CONSTRUCTION THEORY

Career construction theory evidently responds to the requirements of the current world of work, where a career is not a lifetime commitment, but the management of many projects, each project in preparation for the next, while balancing the work-role in a constellation of many different life roles and adapting to changes throughout a lifetime (Savickas, 2006). A shift is visible from using objective, predictive assessment tests towards an interactive construction of a career whereby an individual is an active agent in designing and managing his/her career path (Savickas, 2005; Watson & McMahon, 2009). Career construction also allows for use of the best concepts of the content and process theories from the 20th century to guide counsellors and clients alike in a way of thinking about how work is chosen and used by an individual in today's world of work (Hartung, 2010a; Savickas, 2006). Through career construction individuals are assisted

to objectively match themselves to occupations and subjectively use work for instilling meaning in their lives (Hartung, 2009).

Career construction theory emphasises that individuals are active agents in building their careers by imposing meaning on vocational behaviour (Hartung, 2007; Watson & McMahon, 2009). It realises the goal of offering a comprehensive theory that integrates the segments of the life-span, life-space career development theory with the developmental perspective on vocational choice and adjustment as initially described by Super (1957; 1990 in Hartung, 2007). Integrating the segments of the life-span, life-space approach is accomplished by attending to four fundamental dimensions of vocational behaviour and their development. These dimensions (listed below) constitute the cornerstones of the career construction theory as described by Savickas (2005 in Maree, 2010a:263) and Hartung (2007 in Maree 2010a:263):

- *Life structure, the assemblage of work and other roles that constitute a person's life*
- *Career adaptability strategies, the coping mechanisms used by individuals to negotiate developmental tasks and environmental changes that accumulate in the course of a lifetime*
- *Thematic life stories, the motivations, driving forces that pattern a life*
- *Personality style, such as abilities, needs, values, interests and other traits that typify a person's self-concept*

In summary, career construction theory takes into account the how, what and why questions (Savickas, 2006) asked during career counselling. Life structure and career adaptability strategies focus on *how* people assemble life roles and deal with developmental tasks and environmental changes. Thematic life stories focus on *why* a particular career direction is taken. Finally, personality style focuses on *what* traits a person possess (Hartung, 2007; Maree, 2010a; Savickas, 2005). By answering all these questions, thorough and relevant career counselling is provided to individuals who face times of change.

2.6.1 Life structure

Super (1990 in Hartung, 2007) recognises that, while making a living through work, people live a life within a constellation of roles. Different roles include cultural roles, work roles, leisure roles, and emotional roles revolving around family, friends, gender

and age. Different life roles involve different meanings to individuals who have to adapt and find meaning in several roles at the same time (Feldman, 2002b; Ibarra, 2003 in Schreuder & Coetzee, 2006). The fulfilment of diverse roles holds personal significance and satisfaction for an individual (Hartung & Taber, 2008). Maree (2010a) concludes that individuals consequently have a unique opportunity of deciding how the work role will fit into the various roles in an individual's life.

During times of transition individuals often seek counselling (Savickas, 2005). For instance when individuals find themselves in a time of role changes and, therefore, wishes to reconfigure their life structures into a different pattern of life roles (Savickas, 2002 in Hartung & Taber, 2008), the focus is specifically on career counselling. As a result, career counsellors need to recognise and address the meaning and importance that clients ascribe to various life roles (Savickas, 2002 in Hartung, 2007). They should be au fait with the principles of facilitating career adaptability, which will be elucidated next.

2.6.2 Career adaptability

Career adaptability involves the adjustment to certain changes, including the mastering of vocational development tasks, dealing with occupational traumas and negotiating job transitions over time (Hartung & Taber, 2008; Savickas, 2008). Five principal types of coping behaviours, namely orientation, exploration, establishment, management and disengagement foster adaptation to the above-mentioned tasks, traumas, and transitions. These coping behaviours incorporate and advance Super's (1990 in Hartung, 2007) developmental career stages. Each career stage is described and the primary task of that stage entails an adaptive goal. Career construction theory further suggests that individuals may cycle and recycle through different stages at different times during their lives (Hartung, 2007) and that the extent to which the adaptive goal is reached within each stage contributes to satisfaction with life linking to work (Hartung & Taber, 2008). In the current world of work that is characterised by globalisation and various changes using the theory of career adaptability to understand how individuals cope and even thrive in the world of work is increasingly relevant (Blustein, 2006 in Murphy, Blustein, Bohlig & Platt, 2010). As each career transition approaches,

individuals can adapt more effectively if they adopt the following behaviours (Savickas, 2008:20):

- *Growing awareness*
- *Information seeking followed by informed decision making*
- *Trial behaviours leading to a stable commitment and projected forward for a certain time period*
- *Active role management*
- *Eventually forward-looking disengagement*

Certain **a**ttitudes, **b**eliefs and **c**ompetencies (referred to as the career construction **ABC**'s) are grouped into four dimensions of adaptability namely concern, control, curiosity and confidence (see Table 2.2 for a more detailed description). Increasing career adaptability is one of the main goals of career construction counselling in order for an individual to be more effective in navigating and managing his/her own career development as is expected in the world of work (Hartung & Taber, 2008).

2.6.3 Thematic life stories

Life themes are derived from career stories, and the theme component brings to the foreground the question why people move in a particular vocational direction and what gives an individual purpose, meaning, direction and coherence in life (Hartung & Taber, 2008). Therefore this part of career construction recognises that a career is self-conceptualised, and that it is an activity that imposes meaning and direction on vocational behaviour (Hartung, 2007). Career stories reveal the tasks, transitions and traumas an individual has faced and the meaning of career is constructed (Savickas, 2005). Career stories *tell how the self of yesterday, became the self of today and will become the self of tomorrow* (Savickas, 2005:58).

The stories that are told by individuals shape their relationship with others and with the context in which they live – in turn, others and the context shape their stories (McMahon, 2007). Because these life stories are used for career counselling, it is important to attend to both the *public or objective meaning* and the *private or subjective meaning* of interests, abilities, values and choices (Savickas, 1993:19). Life themes that emerge from the stories are then viewed as the private or subjective meaning that

complements the objectified scores derived from person-environment-fit theories (Busacca, 2007; Savickas, 2005). More specifically, a pattern that denotes a life theme is created by invoking meaning on past memories, present experiences and future desires (Savickas, 2006). Thus, meaning and purpose rather than traits and scores compose life themes (Savickas, 2005) and it is these themes derived from stories that indicate why the traits matter to a person (McIlveen & Patton, 2007).

2.6.4 Personality style

The personality style component of career construction attends to individual differences in values, abilities, needs and interests (Savickas 2005a in Hartung, 2007). Holland's theory (1973, 1985 in Schreuder & Coetzee, 2006) suggests that there is an ideal fit between a personality type and an environment. Thus some occupations will allow for a better fit than others. Career construction incorporates Holland's RIASEC (realistic, investigative, artistic, social, enterprising, conventional) model and acknowledges the benefits of identifying traits through psychometric tests. However, within career construction, *traits denote subjective styles of adapting to the social world rather than objective entities that people possess* (Hartung & Taber, 2008:80). Hence, career construction seeks to enhance not replace) person-environment-fit theories (Savickas, 2005).

Gaining experience during adolescence through part-time jobs is important in exploring different career options and making matches with occupations consistent with the individual personality style (Hartung & Taber, 2008; Hartung, 2007). Adaptive coping strategies are represented by vocational personality traits like interests and other characteristics, and these strategies are considered active rather than passive. Career construction theory views interests and other traits as dynamic and subjectively experienced possibilities for adapting to the social world. Individuals can consequently use or not use certain adaptive coping strategies, depending on the situational demands (Hartung, 2007). Career construction theory thus regards personality characteristics not as characteristics for fitting and individual to an occupation, but rather as enabling individuals to negotiate changes and adapt to a variety of career possibilities (Hartung, 2007).

2.7. LIFE DESIGNING

Savickas et al. (2009) suggest that life designing is a paradigm for career construction in the 21st century. The life designing paradigm brings about a shift from matching an individual to an occupation by means of test scores to making meaning through different life experiences by storytelling (Hartung, 2010a). Life designing offers a paradigm for not only understanding how people choose a career, but how individuals construct their lives through work (Savickas et al., 2009). Workers should become lifelong learners who embrace flexibility rather than stability and who also remain employable, especially by creating their own opportunities. These new conceptions of work life recognise that *the career belongs to the person not to the organisation* (Duarte, 2004 in Savickas et al., 2009:2). Individuals are therefore challenged to play a greater role in the construction of their own career (Patton, 2005). By assisting individuals in understanding how education and occupation can be used to design their lives, the career construction counsellor allows individuals to better construct their careers (Hartung, 2010b).

A shift away from the idea of living to work towards working to enhance the quality of life is also part of the changing nature of work, and strengthens the idea that the career will be individualistic (Schreuder & Coetzee, 2006). Human flexibility, adaptability and lifelong learning are such highly important aspects highlighted by the literature (as presented above) that theoretical models are needed to emphasise these important aspects. Dynamic methods should be adopted that will encourage individuals' imaginative thinking and the exploration of possible selves. Future methods of career counselling should regard the individual as the expert and merely guide him/her to design his/her own life, thus automatically designing also his/her own career (Oyserman, Bybee & Terry, 2006 in Savickas et al., 2009).

2.8. CONCLUSION

In Chapter 2 I explored and discussed various concepts of importance for this study. The reader was alerted to the expectation of and preparation for change in the working world in which we find ourselves today. The relevance of exploring the relationship between career adaptability and top academic achievement was substantiated.

Academic achievement was explored by describing the value and importance it has for various educational stakeholders. Furthermore, the theoretical framework for this research study was explained, indicating why the career construction theory is currently relevant for the diverse South African context. The chapter was concluded by presenting life designing as a relevant paradigm within the career construction theory.

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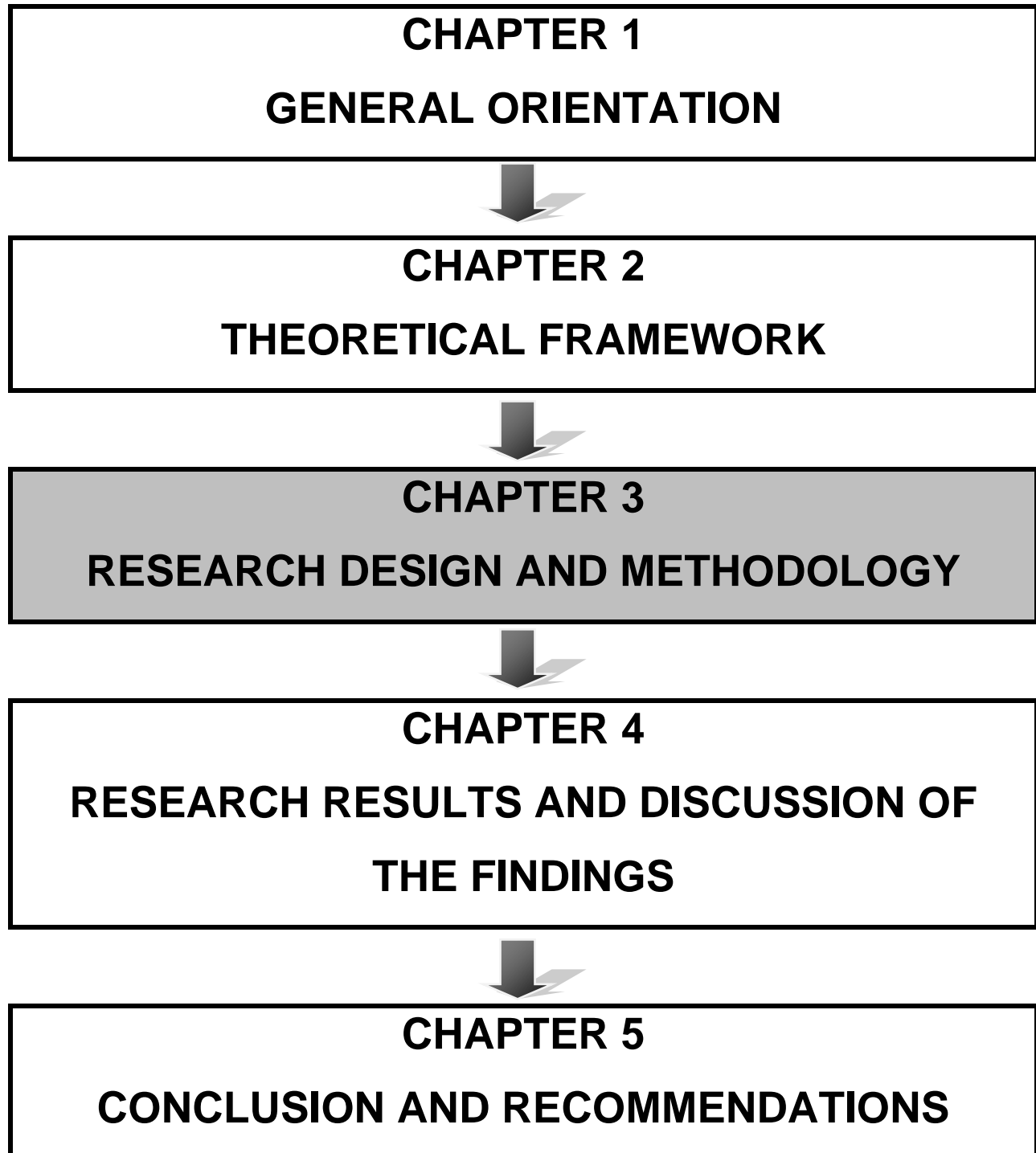
CHAPTER 3
RESEARCH METHODOLOGY

CHAPTER 3 - AN OVERVIEW

Chapter 3 starts off with a discussion of the paradigmatic perspective of the study, followed by an illustration of the research process that was adopted. The research design is subsequently discussed in detail, as well as the rationale for the selection of participants and location of my research study. Methods of data collection, analysis and interpretation used in the study are considered next, followed by an indication of the extent to which ethical issues were addressed in the study. The chapter continues with a discussion of quality criteria that contribute to the trustworthiness of the study and concludes with a discussion of my role as researcher.

3.1.   PARADIGMATIC PERSPECTIVE

A research paradigm is a set of beliefs that shape the way in which the world is seen (Denzin & Lincoln, 2005). As the researcher, I brought my own set of beliefs and paradigms to this research study. It was consequently important to explicitly make these assumptions and paradigms known so as to communicate clearly and unambiguously with the reader of this document (De Vos, 2005a). I was aware of the fact that my assumptions and paradigms could affect the manner in which the research was conducted, analysed and interpreted (Creswell, 2007). The philosophical assumptions indicated in Table 3.1 have therefore guided me to choose the interpretivist paradigm (metatheoretical paradigm) and adopt a qualitative approach (methodological paradigm) in order to best achieve the purpose of my study.

Table 3.1: Philosophical assumptions with implications for practice

Assumption	Question	Characteristic	Implications for Practice
Ontological	What is the nature of reality?	Reality is subjective and multiple, as seen by participants in the study.	Researcher uses quotes and themes in words of participants and

			provides evidence of different perspectives.
Epistemological	What is the relationship between the researcher and that being researched?	Researcher attempts to lessen the distance between himself of herself and that being researched.	Researcher collaborates, spends time in field with participants, and becomes an "insider".
Axiological	What is the role of values?	Researcher acknowledges that research is value laden and that biases are present.	Researcher openly discusses values that shape the narrative and includes her own interpretation in conjunction with the interpretations of participants.
Rhetorical	What is the language of research?	Researcher writes in a literary, informal style using the personal voice; also uses qualitative terms and limited definitions.	Researcher uses an engaging style of narrative, may use first-person pronoun, and employs the language of qualitative research.
Methodological	What is the process of research?	Researcher uses inductive logic, studies the topic within its context and uses an emerging design.	Researcher works with particulars (details) before generalizations, describes in detail the context of the study, and continually revises questions from experiences in the field.

(Creswell, 2007:17)

3.1.1 Metatheoretical paradigm

The interpretivist paradigm was employed during this research study and enabled me to offer an in-depth perspective on the way in which the participants made sense of the

phenomenon being studied (Nieuwenhuis, 2010a). Figure 3.1 graphically summarises the concept of interpretivism.

Figure 3.1: Representation of interpretivism

Multifaceted

Socially constructed

Multiple realities

Reality

Relational

Naturalistic

Interpretation

Meanings   *Phenomena*   *Interpretivism*   *Methods*   *Subjective*

Constructed   *Interpretive*

Holistic   *Descriptive*

Product

Understanding

From within

Not generalisable

Richness and depth
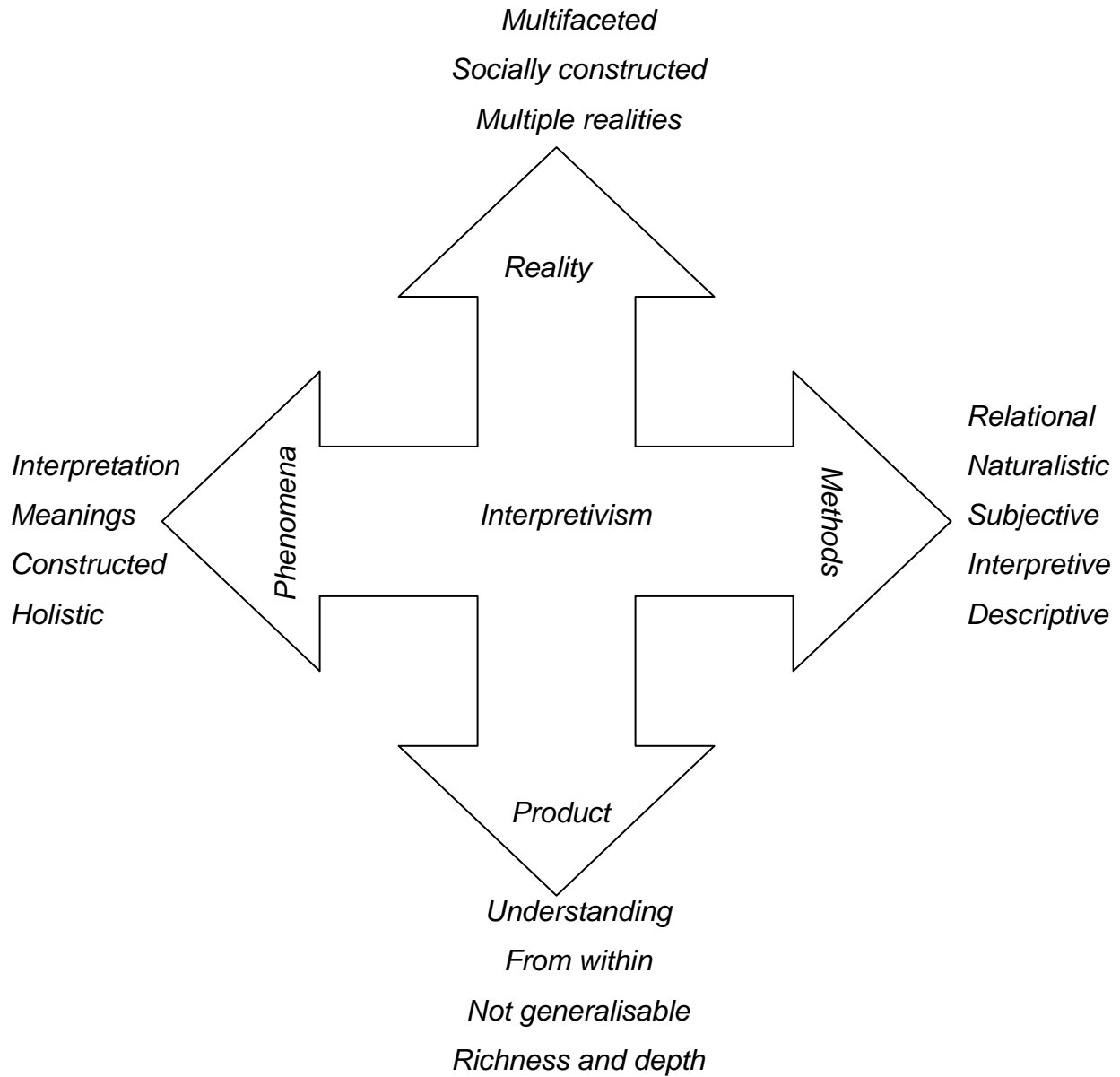
(Nieuwenhuis, 2010a:61)

Conducting my research study from the interpretivist paradigm permits me to gain insight into the career adaptability of top academic achievers. Pertinent to working from this paradigm is the subjective experience of reality by each participant. I take

cognisance of the fact that each person's context is unique, therefore I study the participants within their unique context. As a result the richness and depth of the descriptions in this study is important.

3.1.2 Methodological paradigm

A qualitative research study as described by Denzin and Lincoln (2005:3) *stud[ies] things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meaning people bring to them*. I decided on a qualitative paradigm after considering the purpose of the study (exploring and describing the experiences of the participants from their own point of view) and the nature of the data (collected in real-world settings) to best provide an in-depth, holistic description of the phenomenon being studied (Leedy & Ormrod, 2005). Furthermore, I considered my own belief in the participants' subjective experience of reality (no single reality exists) and admitted that the study would be context bound and therefore needed to be described and presented in its multifaceted form (Cresswell, 1998; Guba & Lincold, 1988 in Leedy & Ormrod, 2005).

Several common characteristics of qualitative research as identified by Creswell (2007) are relevant here:

- *Natural settings* (Creswell, 2007:37). Selecting a qualitative approach implied that I would collect data in a real-world setting and have face-to-face contact with the participants.

- *Researcher as a key instrument* (Creswell, 2007:38). As the researcher, I would be not only the main instrument for data collection, but also the person examining each of the participants' answers to the questionnaire and the information yielded in their individual interview, life-line and life story.

- *Multiple sources of data* (Creswell, 2007:38). I made use of multiple data collection methods and reviewed all data collected in order to make sense of it.

- *Participants' meaning* (Creswell, 2007:39). As the researcher I had to understand the phenomenon being studied from an insider perspective. Thus I had to study the meaning that participants held about the phenomenon being studied (not my own meaning and assumptions).

- *Emergent design* (Creswell, 2007:39). The research process was of an emergent nature, hence I learnt from the participants about their experience of the phenomenon.

- *Theoretical lens* (Creswell, 2007:39). I employed an interpretivist metatheoretical lens in this research study (as was mentioned in the previous section).

- *Holistic account* (Creswell, 2007:39). I aimed to provide an in-depth, holistic description of the phenomenon that was studied.

I was intensely aware of the strengths and limitations of a qualitative research approach and consequently attempted to utilise its strengths as well as address its limitations throughout the course of this study.

As observed by Nieuwenhuis (2010a), the strength of a qualitative approach lies in the richness of exploring and describing the specific phenomenon being studied. Consequently I provided a rich description of the phenomenon being studied. Critique against a qualitative approach includes subjectivity of the selection of the phenomenon being studied, which implies that findings are context bound and cannot be generalised beyond that specific context (Nieuwenhuis, 2010a). The purpose of employing a qualitative research paradigm is, however, not for findings to be generalised, but rather concerns the uniqueness of each specific context (Nieuwenhuis, 2010a). In order to address the weakness mentioned above, a description is provided of the location of the research in order to guide readers as to the context of the research and the extent to which the findings can be applied to their own context.

3.2. THE RESEARCH PROCESS

The different aspects of my research study are illustrated in the figure below.

Figure 3.2: The research process followed during my study

Title	The relationship between career adaptability and academic achievement in the course of life design counselling
Primary research question	What is the relationship between Grade 12 top academic achievement and certain characteristics of career adaptability?
Purpose	To explore and describe the relationship between top academic achievement in Grade 12 and certain characteristics of career adaptability
Paradigmatic perspective	Metatheoretical – Interpretivist Methodological - Qualitative
Research design	Case study
Selection of participants	Two top academic achievers in Grade 12
Data collection	Questionnaire Interview Life line Life story
Data analysis	Conducted on the basis of six predetermined steps Deductive style of analysis: Themes Inductive style of analysis: Subthemes
Findings and implications	Different results were combined into a harmonious whole through a process referred to as crystallisation
Considerations	Ethical considerations Quality criteria

(Adapted from Creswell, 2007; Denzin & Lincoln, 2005; Mohangi, 2008; Neuman, 1997 in Van Dullemen, 2009)

3.3. RESEARCH DESIGN

According to Nieuwenhuis (2010b) a research design is the plan that guides the researcher in selecting participants as well as gathering and analysing data. A case study research design was selected for this study. I studied a bounded system in accordance with Creswell's (2007) statement that case study research involves the exploration of specific phenomena within a particular setting and context. I based the choice of participants on the common characteristic of their top academic achievement in Grade 12 (number one and two on the top 10 academic achievement list) at a specific high school in Pretoria.

Types of case studies are distinguished by the size of the bounded system and the intent of the case study (Creswell, 2007). I selected a collective case study as the research design for this study due to the choice of multiple individuals chosen as participants (Fouché, 2005). I believed that providing a rich description of this collective case study might lead to a better understanding of the phenomenon of the relationship between career adaptability and top academic achievement in Grade 12, and thus also to a better understanding of a larger collection of cases (Fouché, 2005; Stake, 2005).

The choice of a case study as research design required of me to collect extensive data and provide the context for the research (Leedy & Ormrod, 2005). This was done through gathering various sources of data and describing the location and context of my research. I also came to support Peshkin's (1986, in Stake, 2005:447) views about presenting a case study, namely *to present [the] case so that it can be read with interest in the case itself but [there is] always another agenda – to learn from the case about some class of things*. Subsequently, by incorporating the interpretivist paradigm (as described in 3.1.1), I lean towards a holistic understanding of the participants and how they make meaning of the phenomenon being studied (Nieuwenhuis, 2010b) when I present the findings of this study.

3.4. SELECTION OF PARTICIPANTS

Sampling refers to the process of selecting a portion of a specific population for the purpose of a study (Nieuwenhuis, 2010b). In qualitative research, the selection of participants is based on non-probability sampling, rather than on random sampling

(Strydom & Delport, 2005). Purposive sampling, according to Nieuwenhuis (2010b:79), means *that participants are selected because of some defining characteristic that makes them the holders of the data needed for the study*. Consequently, I decided to use purposive sampling to achieve the aims of this research study. Participants were selected on the basis of their top academic achievement in Grade 12. Table 3.2 provides some background to the two participants chosen.

Table 3.2: Participants in this study

	Gender	**Population group**	**Criteria**
Participant 1	Female	White	Number one on top ten achievers list
Participant 2	Female	Black	Number two on top ten achievers list

3.5. LOCATION OF MY RESEARCH

The choice of the qualitative methodological paradigm and the case study research design requires of me to provide the context of the research (Leedy & Ormrod, 2005; Nieuwenhuis, 2010a). The research was conducted at a particular public school in Pretoria, and the participants chosen for the study were the two best achievers out of the top ten achievers in Grade 12 after the year mark for 2010 in Grade 12 was compiled (the top ten achievers are named based on their average performance in all subjects). The participants background information and context within which the research was done is described in more detail in Chapter 4.

3.6. DATA COLLECTION

An important characteristic and key strength of case study research is the fact that extensive data is collected from multiple sources (Nieuwenhuis, 2010a). Numerous forms of data are examined in order to construct a rich and meaningful description of a multifaceted situation (Leedy & Ormrod, 2005). I used four different methods of data collection during my study and these methods are described in the paragraphs that follow.

3.6.1 Questionnaire

The Career Adapt-Abilities Inventory (Savickas, 2010a) was used as a qualitative measure to identify certain attitudes, beliefs and competencies that shape the actual problem-solving strategies and coping behaviours of individuals (Savickas, 2008). These attitudes, beliefs and competencies involve *concern* about the future, *control* to become responsible for shaping selves and environments, *curiosity* when the individual thinks about the self in various situations and roles, and *confidence* that individuals can actualise choices to implement their life design (Savickas, 2008:8).

3.6.2 Individual interviews

I conducted individual interviews with both participants so as to collect data and learn more about each of them, for instance their ideas and beliefs, and especially their perception of the phenomenon as it was experienced by each (Nieuwenhuis, 2010b). The question asked was for the participant to *identify the biggest change or transition she has ever experienced and then tell the story of how it came about, how she prepared for it, how she coped with it, how it turned out, and how it changed her as a person* (Savickas, 2008:16). It is important to mention that a tape recorder was used during the interview, and that everything that had been recorded was transcribed. The participants were well informed about the recording process and the confidentiality with which the information would be handled (De Vos, 2005).

3.6.3 Life line

Each participant was asked to complete her lifeline. This was used as a tool to show when transitions had taken place in each participant's life. Further it presented an opportunity for discussion during the research process (Fritz & Beekman, 2007).

3.6.4 Life story

The stories that are told by individuals shape their relationship with others and with the context in which they live – in turn, others and the context shape their stories (McMahon, 2007). When using life stories for career counselling, it is important to attend to both the *public or objective meaning* and the *private or subjective meaning* of

interests, abilities, values and choices (Savickas, 1993:19). Life themes that emerge from stories are then viewed as the private or subjective meaning. When individuals are given the opportunity to tell their stories it provides a starting point for many in counselling (Amundson, 2003 in McMahon, 2007). During the research study the life story provided valuable information as well as an opportunity for conversation during the individual interview done with each participant.

3.7. DATA ANALYSIS AND INTERPRETATION

Qualitative data analysis is an ongoing process not purely moving consecutively from one step in the data analysis process to the next. Accordingly, data collection, processing, analysis and reporting are interrelated and often done simultaneously (Creswell, 2007; Nieuwenhuis, 2010c). Seidel (1998 in Nieuwenhuis, 2010c) provides a model to explain the non-linear process when data is analysed in qualitative research. This process is presented in Figure 4.1.

Figure 3.3: The data analysis process
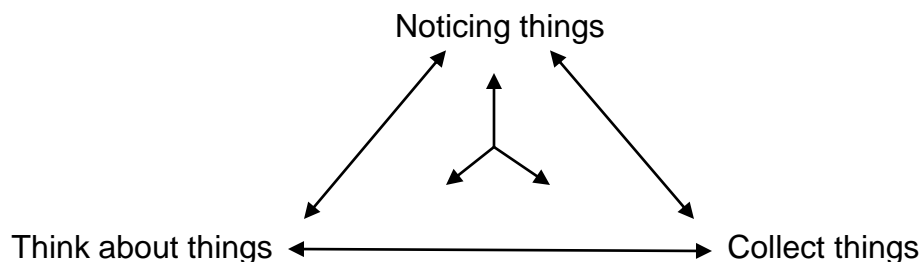
(Seidel, 1998 in Nieuwenhuis, 2010c:100)

As a result of this non-linear process data is visited and revisited often in order to summarise what has been found in terms of *common words, phrases, themes or patterns* (Nieuwenhuis, 2010c:100). There is no right or wrong way for analysing data (Nieuwenhuis, 2010c), but in order to contribute to the rigour of the study certain guidelines is used. These guidelines will be discussed in the next section.

Various processes and procedures are described for data analysis (Creswell, 2003; Creswell, 2007; De Vos, 2005b; Nieuwenhuis, 2010c). As a guideline for data analysis I made use of Creswell's (2003) steps as described in Table 3.2. Remaining cognisant of the fact that one step does not follow on another but the steps being a guideline for the ongoing process of data analysis.

Table 3.3: Data analysis techniques

Steps	Data analysis techniques
Step 1: Organisation of data	After data had been collected it was prepared for analysis. I organised the data and transcribed – verbatim, the audio recorded individual interviews. It is important to know when, where, how and why data was collected and categorise it as such in order to be able to retrieve data and recontextualise parts of data that will be used (Nieuwenhuis, 2010c).
Step 2: Reading of data	Reading through the data several times was imperative so that I could become familiar with the data and have a thorough overview of all data (De Vos, 2005b). Through reading and re-reading data I could write down preliminary impressions from the data indicating what I had been learning from the data (Nieuwenhuis, 2010c).
Step 3: Starting a detailed analysis of data	I made use of *pre-existing* or *a priori* themes that guided the research process (Creswell, 2007:152). These *a priori* themes were identified through the in-depth literature review and theoretical framework as the dimensions of career adaptability, namely: concern, control, curiosity and confidence. I realise that making use of pre-existing themes can limit the analysis rather than presenting the views of participants (Creswell, 2007). Thus, I had to be aware of this throughout the analysis process and remain open to the representation of the voice of the participants. Consequently, an inductive style of analysis was used to identify subthemes. During this phase an external coder was used in order to facilitate quality assurance.

Step 4: Identification and description of themes and subthemes	This phase of the analysis process forms and integral part of the previous phase. From the identification of the a priori themes, themes are colour coded and subthemes are identified and colour coded.
Step 5: Discussion of themes and subthemes	During this phase I had to discuss the meaningfulness of identified themes and subthemes. The relation between concepts would also be indicated. I needed to present an in-depth picture of the research using narrative, tables or figures (Creswell, 2007).
Step 6: Synthesis and interpretation of data	At this point in the analysis process I attempt to synthesise and interpret the data in order to explain the meaning of the data and research.

(Creswell, 2003)

Table 3.4: System for organising the data

Steps	**Organising the data**
Step 1:	All the available data was studied in order for me get an integrated image from the data.
Step 2:	Main themes were identified using pre-existing (a priori) codes. Data was studied again to identify subthemes. All possibilities for subthemes were listed.
Step 3:	The subthemes were compared in order to prevent duplication.
Step 4:	Themes and subthemes were coded using various colours.
Step 5:	Subthemes regarded as the most important was used.

(Meijer, 2006)

3.8.   ETHICAL ISSUES

It is essential that as the researcher I follow and abide to ethical guidelines throughout the research process (Hinckley, 2006) and ensure that the entire research study is completed in an ethically correct manner (Strydom, 2005). Furthermore, I am ethically

obliged to ensure that I am competent and adequately skilled in undertaking the research (Stydom, 2005). Additionally, the research findings should be reported in an honest manner without misrepresentation of what I have done or misleading the readers about the nature of the findings (Leedy & Ormrod, 2005). Ethical principles relevant to this study will now be discussed in more detail.

3.8.1 Confidentiality, privacy and anonymity

Confidentiality indicates the handling of the data gathered in a confidential manner (Strydom, 2005). During the data gathering process the individual interviews were recorded and transcribed. The participants also completed a questionnaire as well as their life stories and life lines. All of the data and information were handled in a confidential manner, ensuring confidentiality.

Privacy and anonymity implies the element of personal privacy regarding the participants' (Strydom, 2005). It remains my responsibility as researcher to respect the privacy and identity of the participants' and anonymously present the findings of the data gathered during the research process (Leedy & Ormrod, 2005).

3.8.2 Informed consent/assent and voluntary participation

As prescribed by the Health Professions Act (Act 5 of 1974) ethical code of professional conduct, I adhered to the guidelines for obtaining informed consent. I informed the participants of the nature and purpose of the research and what would be expected of them. Voluntary participation was emphasised and their right to confidentiality and anonymity thoroughly discussed. Furthermore, their right to withdraw at any time was discussed, emphasising voluntary participation (Leedy & Ormrod, 2005, Strydom, 2005).

I obtained written informed consent from the Gauteng Department of Education (Appendix D) to conduct the study at a public school, as well as from the School Principal (Appendix B). The School Governing Body was thereafter informed of the research study and was satisfied that the correct procedures were followed in obtaining consent and approved that the research could continue. Additionally, written informed consent was obtained from the parents of the learners who participated in the research

study (Appendix B) and informed consent from the learners themselves (Appendix B). I also received ethical clearance from the Faculty of Education at the University of Pretoria's ethics committee (Appendix C).

3.8.3 Protection from harm

Prior to the research study accurate and comprehensive information was given to participants about the potential impact of the study and participants was given the opportunity to ask questions (Elmes, Kanotwitz & Roedige, 1999 in Gomez da Silva, 2008; Leedy & Ormrod, 2005; Strydom, 2005). According to Leedy and Ormrod (2005), risk involved for participation in the study should not be appreciably greater than risk of daily living, therefore my highest priority was protection from harm for the participants. Participants were not exposed to any physical risk or harm. However, the possibility existed of emotional and psychological difficulties being experienced due to the personal nature of information given for the research study (Ferreira, 2006). Therefore, if debriefing and counselling was deemed necessary, I would provide this. If I were unable to provide this, I would provide referrals to appropriate professionals.

3.9. QUALITY CRITERIA

Trustworthiness of the findings in qualitative data is of the utmost importance (Nieuwenhuis, 2010c). Therefore certain criteria need to be adhered to in order to evaluate the trustworthiness of the study (De Vos, 2005b). I strive to ensure rigour and trustworthiness in this research study by addressing aspects of credibility, transferability, dependability, confirmability and authenticity which will be discussed in the next section.

3.9.1 Credibility

Describing the context surrounding the research thoroughly contributed to credibility (De Vos, 2005b). The process of analysis and interpretation were made visible and verification of information with participants done in order to make sure that I accurately portray the participants' viewpoints or positions. I am also an instrument during the

research process, therefore it is important to monitor my own developing constructions throughout the research process (Mertens, 2010).

3.9.2 Transferability

Transferability refers to findings being generalised based on the assumption that the participants chosen for the sample represents the population (Mertens, 2010). In qualitative research transferability may be problematic (De Vos, 2005b), therefore it was imperative that I provide a rich description of the participants' context, so that other readers may determine the degree to which the research findings are similar to the contexts or situation of the reader (Mertens, 2010).

3.9.3 Dependability

The consideration of dependability is whether findings will be similar if research was replicated (Babbie & Mouton, 2001). The qualitative/interpretive assumption of research indicates that the *social world is always being constructed, which makes the concept of replication problematic* (De Vos, 2005b:347). Accordingly, it is important to provide readers with enough information to convince readers that the findings did indeed occur (Durrheim & Wassenaar, 2002 in Hinckley, 2005).

3.9.4 Confirmability

Confirmability means that the data is represented in such a manner that it can be tracked to the source. The logic used to interpret the data should be made explicit in order to prove the interpretation of the data is not a figment of the researcher's imagination (Mertens, 2010). Therefore, I had to present the interpretation of the data clearly to be able to indicate that the data was truly given by participants in the study.

3.9.5 Authenticity

Authenticity is described as a type of validity that refers to *providing a balanced and fair view of all perspectives during the study* (Lincoln, 1995, 2009; Lincoln & Guba, 2000 in Mertens, 2010:260). It is also again important to represent the context within which

research was done because not all *universal truths* (Mertens, 2010:261) can be represented in the research report.

3.10. MY ROLE AS RESEARCHER

I fulfilled a multifaceted role as researcher. With the onset of my research I had to find the purpose of my research in order to be able to identify and familiarise myself with the various concepts and methodology relating to my research study (Van Dullemen, 2009). In undertaking the in-depth literature study I had to become a critical reader in order to gain relevant knowledge about related research and scholarly work that inform and support the study (Marshall & Rossman, 2011). In communicating with the reading public through the writing of all chapters in my study, I had to learn to navigate the reader through the text (Murray, 2005).

During this qualitative study I was the research instrument in the data gathering, analysis and interpretation process (Nieuwenhuis, 2010b). This role allowed me to form partnerships with the participants in order to collect data, which furthermore entailed analysing and interpreting the data in order to create understanding (Maree & Van der Westhuizen, 2010). In the choice of qualitative research I recognised the importance of my ability to interpret and make sense of the data collected, which is important for understanding the phenomena being studied. I realised that there may be multiple perspectives held by different individuals, therefore I had to take cognisance of my own subjectivity (Leedy & Ormrod, 2005). As my own subjectivity could not be eliminated (Niewenhuis, 2010b), I had to continually reflect on my own assumptions and set of beliefs with which I entered this research study (Denzin & Lincoln, 2005, Ferreira, 2006). In order to accurately present the findings and conclusion of this research study, I adhered to quality criteria to ensure the rigour and trustworthiness of the study (Nieuwenhuis, 2010c).

3.11. CONCLUSION

In this chapter, I explored the paradigmatic assumptions in accordance with the purpose of my research. I referred to the strengths and limitations of the choice of the paradigmatic assumptions and research design, along with how I remained aware of

them. Furthermore I explained the research process together with guidelines for collecting, analysing and interpreting the data. I then explored the ethical considerations for this study and described the criteria for trustworthiness and rigour of the study. I concluded this chapter with conveying my role as research.

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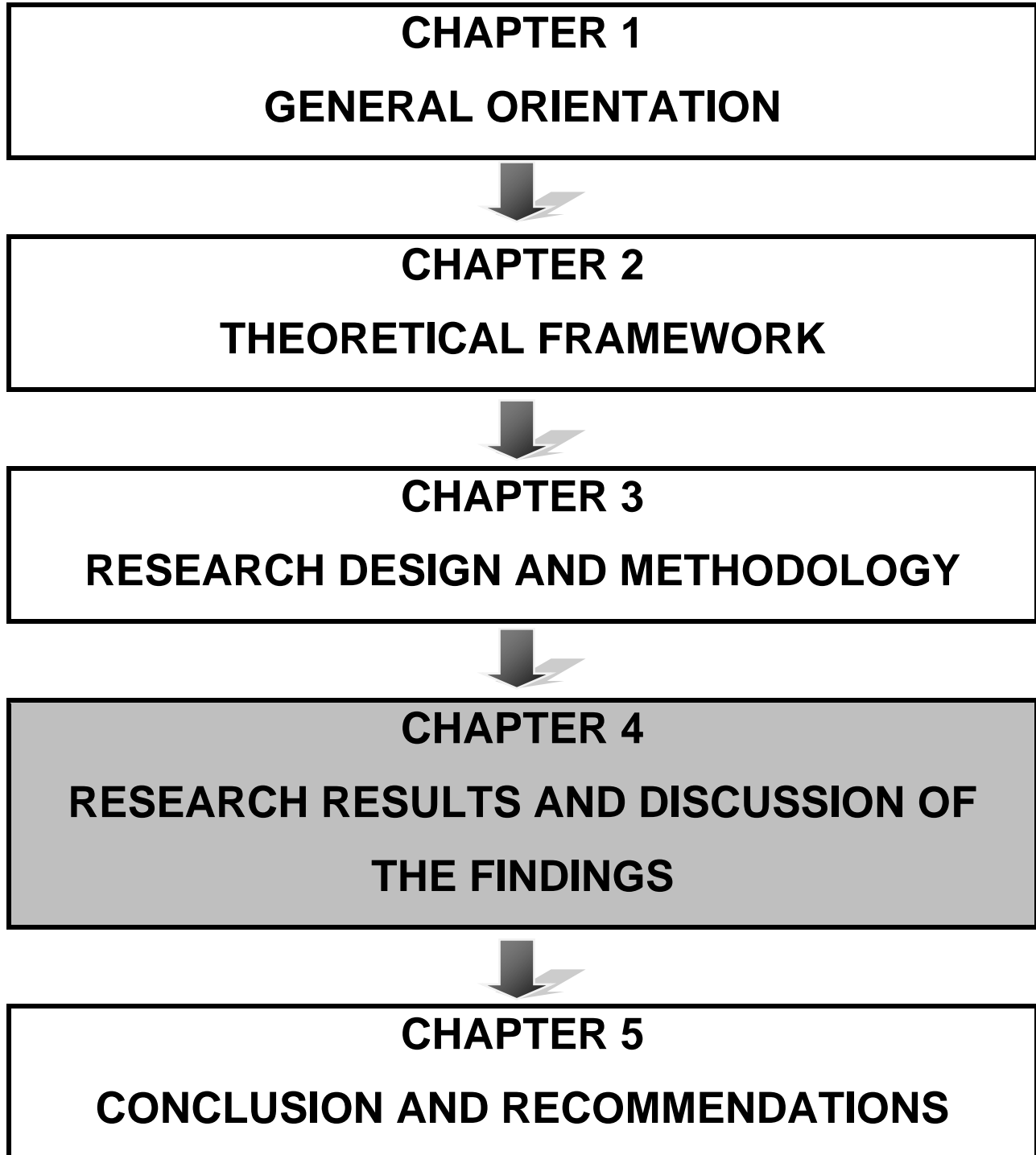
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RESEARCH RESULTS AND DISCUSSION OF THE FINDINGS

CHAPTER 4: AN OVERVIEW

This chapter presents the results obtained from the different data sources used in this research study and contains a discussion of the findings. In order to present the results authentically, the methods used for data analysis are discussed, as well as the procedure followed for identifying themes and subthemes in order to show how results of this research study were generated. Furthermore, background information on the participants is provided in order to contribute to the rich description of the context within which research took place. Qualitative research was the methodology of choice, with the research design being case study research. Chapter 4 concludes with a literature control of the results of this research study by integrating the interpretations of the current study with the existing body of literature.

4.1. INTRODUCTION

The purpose of conducting research is to produce findings (De Vos, 2005b); therefore Patton (2002 in De Vos, 2005b) states that data analysis transforms data into findings. Data analysis is an ongoing, non-linear process of visiting and revisiting data (Nieuwenhuis, 2010c) and is done in order to be able to *search for general statements about relationships among categories of data* (De Vos, 2005b:333). Accordingly then, Chapter 4 communicates the process of data analysis, presents research results and produces findings, as is the purpose of qualitative research.

4.2. DESCRIPTION OF PARTICIPANTS

According to Nieuwenhuis (2010c) it is important to describe the background information of participants in a research study, as well as the context in which the study was conducted. Therefore, a detailed description follows of the participants' background information and the context within which the research was done.

4.2.1 Participants' background information

4.2.1.1 Participant 1

Participant 1 was an 18-year-old white, Afrikaans-speaking female, and the only child of parents who were both employed. She was in first place on the Top Ten list of academic achievers in Grade 12 at the time of the collection of data.

Table 4.1: Academic achievements of Participant 1 in her Grade 12 year

Subject	Average Term 1	Average Term 2	Average year mark
Afrikaans (Home Language)	75%	72%	73%
English (Additional Language)	84%	84%	80%
Mathematics	90%	86%	87%
Life Orientation	86%	86%	84%
Physical Science	82%	80%	77%
Accounting	83%	65%	70%
Life Science	83%	90%	81%
Mathematics Paper 3	76%	70%	77%
Total	83%	80%	79%

Participant 1 was involved in the following extracurricular activities during her Grade 12 year:

- Olympiads
- *UP with Science* programme at the University of Pretoria
- Chemical Engineering Project at Tshwane University of Technology
- Matric council at her school
- Lab prefect
- Member of a school hockey team
- Speech festival

4.2.1.2 Participant 2

Participant 2 was an 18-year-old black English-speaking female, the second of three children, with a niece (her eldest sister's daughter) also part of the family. Only her father was employed. She was placed second on the Top Ten list of academic achievers in Grade 12 at the time of the collection of data.

Table 4.2: Academic achievements of Participant 2 in her Grade 12 year

Subject	Average Term 1	Average Term 2	Average Year mark
Afrikaans (Additional Language)	75%	80%	76%
English (Home Language)	87%	85%	85%
Mathematics	83%	87%	80%
Life Orientation	83%	94%	87%
Physical Science	80%	70%	54%
Geography	93%	87%	86%
Life Science	86%	88%	80%
Mathematics Paper 3	68%	44%	50%
Total	84%	84%	78%

Participant 2 was involved in the following extracurricular activities during her Grade 12 year:

- Olympiads
- Class captain
- Speech festival

4.2.1.3 Similar background information

Both participants were in Grade 12 in a public school in Pretoria. According to both they have been part of the top ten academic achievers since Grade 8. This was confirmed by my review of their past school records. They were chosen for my research based on their placing (first and second) on the top ten list of academic achievers for Grade 12 learners (2010) in a specific high school in Pretoria. This list is compiled by calculating

the average of the four compulsory subjects (English, Afrikaans, Mathematics and Life Orientation) and the average of the three best subjects (if more than seven subjects are taken). Ranking on the top ten academic achievers list is determined according to performance and the overall average calculated.

4.2.2 Context within which the research was conducted

The specific school in Pretoria where the research was done attracts learners from diverse settings and backgrounds. Learners from various races attend the school, with whites predominating, followed by blacks, Indians and coloured learners. The financial situation of families varies from very rich to very poor. Learners come from geographical settings either close by, where they can walk to school, or very far away, where they have to use public transport to travel to school, which usually takes a lot of time. Consequently, learners have to cope with diverse circumstances based on many different factors.

4.3. PROCEDURE FOR IDENTIFYING THEMES AND SUBTHEMES

The aim of data analysis is to make sense of the data (Nieuwenhuis, 2010c) and in this regard my goal was to summarise the data into meaningful themes and subthemes. Leedy and Ormrod (2005:96) emphasise the fact that *quantitative research is not exclusively deductive, nor is qualitative research exclusively inductive.* I therefore concluded that researchers could use both deductive and inductive styles for analysing data. The different styles used for identifying themes will be discussed in the next sections.

4.3.1 Deductive style of identifying themes

I take cognisance of the fact that, *no matter how hard we try, there are no purely inductive studies* (Bernard & Ryan, 2010:107). Accordingly, the first part of coding was done deductively. I sought to find evidence for the existence of four pre-determined themes that emerged from my literature review. These themes were concern, control, curiosity and confidence. I used my research questions and theoretical framework to

name these four themes – in other words, my four main themes were determined *a-priori*, in a deductive way.

4.3.2 Inductive style of identifying subthemes

During the deductive process of attempting to see if evidence could be found for the existence of my four main themes, I used an inductive style to identify subthemes based on the four main themes. During the data analysis I grouped together – into clusters of subthemes – those comments and responses that I considered to be related to each other (Nieuwenhuis, 2010c).

4.3.3 Themes and subthemes uncovered during data analysis

The themes and subthemes uncovered during data analysis are described below, together with inclusion and exclusion criteria. An external coder[2] verified the identified themes and subthemes (Denzin & Lincoln, 2000). These descriptions of themes and subthemes are clarified and enhanced by verbatim quotes from participants. In order to identify the participant and data set from which the quote was taken, the coding system described in Table 4.3 will be used.

Table 4.3: Identifying the source of a quote

Number of participant	Number of data set	Part of text	Code used
Participant 1	Data set 1	Questionnaire	P1:DS1
Participant 1	Data set 2	Life line	P1:DS2
Participant 1	Data set 3	Life story	P1:DS3
Participant 1	Data set 4	Individual interview	P1:DS4
Participant 2	Data set 1	Questionnaire	P2:DS1
Participant 2	Data set 2	Life line	P2:DS2
Participant 2	Data set 3	Life story	P2:DS3
Participant 2	Data set 4	Individual interview	P2:DS4

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[2] The themes and subthemes have been verified by Mrs. Riandie Lötter, an Educational Psychologist.

Using the pre-determined themes of concern, control, curiosity and confidence, I recognise that these themes did not occur consecutively in the full text for data collected. Although the full texts for all data collected are not provided in this chapter due to space constraints, I take cognisance of the inter-dependability of themes within the complete text. I did nonetheless discuss each theme separately for the sake of clarity, because the purpose of this chapter is to present the significant findings in an understandable way rather than to provide the reader with full text. I identified subthemes for the main themes of concern, control, curiosity and confidence through an inductive style of analysis. For the sake of completeness, the organisation of data into the four main themes is provided in Appendix E. In addition, the whole data analysis process is indicated for the identification of themes and subthemes in Appendix E.

Table 4.4: Theme 1 and Subthemes 1.1 – 1.4

Theme 1: CONCERN		
Deals with issues of orienting oneself to the future and feeling optimistic about it (Hartung, 2007:110). *Concern about the future helps individuals look ahead and prepare for what might come next* (Savickas, 2008:8).		
Subthemes	**Inclusion criteria**	**Exclusion criteria**
1.1 Choice awareness	Becoming aware of choices where the participant has some degree of control over the choice. Example: *Becoming aware of the educational and vocational choices that I must make* (P2:DS1) *My mother told me that it is all about choices* (P2:DS4)	Compulsory activities, where the participant involuntarily has to do something. Prescribed activities with no control over the choice. Example: *I had to give them (pets) away, for they were basically destroying Dad's garden.* (P1:DS3)
1.2 Anticipation and expectation	Hope for the future, or looking forward to something in the future. Also, expecting change and anticipating that some kind of action needs to be taken. Example: *One day become a genetic engineer* (P1:DS3) *Anticipating changes I must make* (P1:DS1) *On what to expect next year* (P2:DS4)	When a change is automatic or assumed. Example: *Begin high school* (P1:DS2)

1.3	**Future orientation**	The participant is setting and pursuing goals; directing individual thoughts and activities towards the future; having optimism about the future; imagining possible selves and future scenarios. Thus: where does the participant see him-/herself in the future? Example: *Thinking about what my future will be like* (P2:DS1) *Aiming to complete my studies at either Medunsa, Tuks or Wits University* (P2:DS3) *Imagining what my future will be like* (P1:DS1)	The future orientation of other people close to the participant. Even though such orientation had an impact on the participant's life, it is excluded from his/her personal future orientation. Example: *My mother decided to leave her job ... to further her studies so that she could get a better job.* (P1:DS3)
1.4	**Planning and preparation**	Intentionality is implied by purposely planning to do something and taking the necessary action. Example: *I am almost done with my matric year and starting to prepare for end exams, as well as for next year* (P1:DS3)	Hope for something to happen, without planning and decisive action. Example: *Ek hoop in die eindeksamen doen ek goed* (P1:DS3)

Table 4.5: Theme 2 and Subthemes 2.1 – 2.3

Theme 2: CONTROL			
Involves increasing self-regulation through career decision making and taking responsibility for ownership of the future (Hartung, 2007:110). *Control enables individuals to become responsible for shaping themselves and their environment to meet what comes next by using self-discipline, effort and persistence* (Savickas, 2008:8).			
	Subthemes	**Inclusion criteria**	**Exclusion criteria**
2.1	**Decision making**	Taking a specific decision after various alternatives have been considered. Example: *Ek het ook al my vakke gekies vir dit wat ek wil swot, soos Mikrobiologie* (P1:DS4) *I started seeing right from wrong and choosing friends that lifted me uphill instead of down hill* (P2:DS3)	Routine activities. Example: *There I enjoyed a routine of reading and drawing* (P2:DS3)
2.2	**Individual responsibility**	Behaviour that is self-determined for the benefit of the individual. Example: *For me, school was more than just education. I saw it as an opportunity to learn other children's cultures as well as to teach myself to interact with all different kinds of people* (P2:DS3) *I push myself until I get my grades* (P2:DS4)	Behaviour or decisions that are determined by others even though they benefit the individual. Example: *All of a sudden my parents decided that they don't want me that side anymore because of distance* (P2:DS4)

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| 2.3 | **Persistence and patience** | The participant shows capability to calmly persist until the successful outcome of an action is achieved, even though difficult circumstances might arise.
Example:
It became apparent that I want to become a medical doctor. I think I was ready to be able to settle for extra more years
(P2:DS4) | I failed to find examples of exclusion criteria for this subtheme. |

Table 4.6: Theme 3 and Subthemes 3.1 – 3.4

Theme 3: CURIOSITY		
Entails engaging in productive career exploration and approaching the future realistically (Hartung, 2007:110). *Possible selves and alternative scenarios are explored when the curious person thinks about the self in various situations and roles* (Savickas, 2008:8).		
Subthemes	**Inclusion criteria**	**Exclusion criteria**
3.1 **Investigative (observing)**	Either seeking information after a tentative choice was made for a career, or considering possibilities and seeking information that precludes a career choice. Example: *Uitgevind watse velde is daar en wat presies daar gebeur* (P1:DS4)	Activities where action was taken and where the participant was practically involved in the activity. Example: *Ek het ook aan goeters deelgeneem in die loop met, by Tukkies* (P1:DS4)
3.2 **Exploring (doing)**	Taking part in activities for the purpose of considering the possibility of doing similar activities as part of a career.	Taking part in extracurricular activities for fun, without the purpose of considering such an activity as part of a

		Example:	career.
		Because of wanting to become a doctor, I volunteered to be in the schools first aid team	Example:
			I developed a skill of dancing. Although dancing became my hobby, I let it remain a skill and nothing else
		(P2:DS3)	(P2:DS3)
3.3	**Relationship building**	Building of relationships as a coping resource when faced with new and unfamiliar situations.	Established friendships.
		Example:	Example:
		(Children met at academic camp) We also exchanged numbers, saying that we should meet next year at certain universities ... by doing that, maybe next year I know that we are going to communicate	*I made friends with MM and KM which at present they are still my closest friends.*
			(P2:DS3)
			I met my best friend, C, on this day and after twelve years we are still best friends
		(P2:DS4)	(P1:DS3)

Table 4.7: Theme 4 and Subthemes 4.1 – 4.4

Theme 4: CONFIDENCE			
Deals with acquiring problem-solving abilities and self-efficacy beliefs (Hartung, 2007:110).			
Confidence that the person can actualise choices to implement his/her life design (Savickas, 2008:8).			
	Subthemes	**Inclusion criteria**	**Exclusion criteria**
4.1	**Pride and self-belief**	Feelings of satisfaction are present and pleasure is derived from academic accomplishments. Confidence in own cognitive abilities.	Satisfaction, pride and self-belief derived from accomplishments in other areas, for instance sport or cultural activities.
		Example:	Example:
		The whole course was rewarded with a scholarship by	*Club wins hockey league*

		Tukkies (P1:DS3) *I know in 7 years' time, I will get a chance to wear formal clothing when I graduate for my degree at MBChB* (P2:DS3)	(P1:DS2) *Got silver for poem festival* (P2:DS2)	
4.2	**Trustworthiness**	Being dependable. Individual is reliable and others have confidence in him/her. Example: *Being dependable – doing what I say I will do* (P2:DS1) *Working to the limits of my ability* (P1:DS1)	I failed to find examples of exclusion criteria for this subtheme.	
4.3	**Ability to overcome challenges**	When faced with difficulties the participant overcomes these difficulties in order to be successful in his/her career. Example: *Say, I can come for BSc for just one year and after that one year if my Science marks upgrade then they can take me to medicine* (P2:DS4)	I failed to find examples of exclusion criteria for this subtheme.	
4.4	**Learning took place**	Acquiring new knowledge or skills or modifying existing knowledge or skills regarding individual growth. Example: *Thus I end one chapter of my life and store it on the shelf of my life, there to be read whenever, but never to be relived. But this is not negative, this is positive; for I am*	Excluding learning for academic subjects. Example: *I think from getting my marks ... the highest marks* (P2:DS4) *Become first place on the academic team* (P2:DS3)	

	starting a new chapter with endless possibilities. (P1:DS3) *Learning new skills* (P2:DS1)		

4.3.4 Frequency of occurrence of themes and subthemes in data sets

The frequency with which themes and subthemes occurred in relation to each data source is provided in order to show the contribution that each data source made in the entire data collection process. According to Table 4.8 and Figure 4.1, the interviews proved to be the most valuable data source, while the life line was the least contributing source.

Table 4.8: Occurrences of themes and subthemes in data sets

Concern	Questionnaire	Life line	Life story	Interview	Control	Questionnaire	Life line	Life story	Interview
Choice awareness	6	1	4	7	Decision making	4	1	7	16
Anticipation and expectation	6	0	6	7	Individual responsibility	16	0	10	18
Future orientation	6	0	9	9	Persistence and patience	2	0	5	5
Planning and preparation	6	0	1	5					
Curiosity	Questionnaire	Life line	Life story	Interview	Confidence	Questionnaire	Life line	Life story	Interview
Investigative (observing)	14	0	3	15	Pride and self-belief	6	15	16	12
Exploring (doing)	6	0	11	8	Trustworthiness	8	0	1	0
Relationship building	0	0	3	8	Ability to overcome challenges	6	0	1	I 7
					Learning took place	4	1	10	1

Figure 4.1: Visual demonstration of occurrences of themes in data sets

Questionnaire	90/313	28,75%
Life line	18/313	5,75%
Life story	87/313	27,80%
Interview	118/313	37,70%
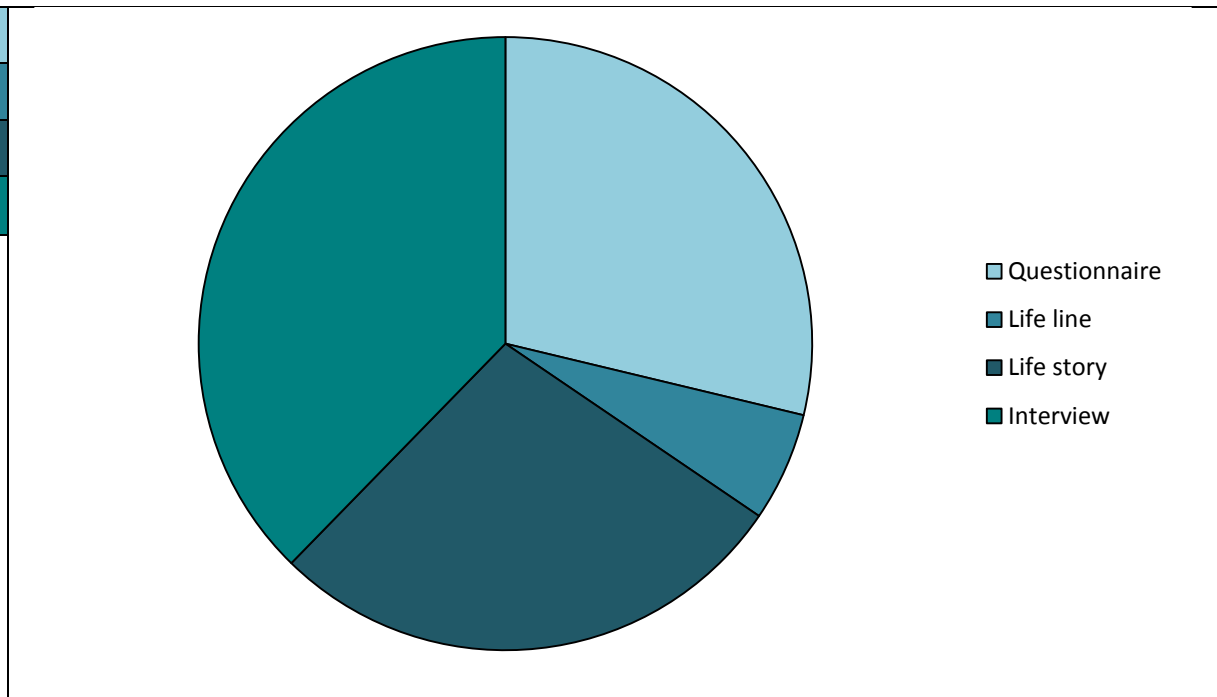
4.4. DISCUSSION OF THEMES AND SUBTHEMES

Themes and subthemes that emerged from the study are discussed in the next section. Discussions are enhanced and supported by quotations from verbatim responses (where relevant) as given in various data sets by the participants.

Theme 1: Concern

Subtheme 1.1: Choice awareness

Findings indicate that the participants were both aware of the choices they had to make regarding their future, specifically relating to career choices. Participant 1 indicated that she was aware of the impact that her current decisions has on her future: *Realising that today's choices shape my future* (P1:DS1). In anticipation of the choice that she needed to make now, she already made a choice in Grade 10 to take part in a programme at the University of Pretoria so as to exert control over her career choice in Grade 12: *Start at UP with Science* (P1:DS2). *In grade 10 my science teacher ... nominated me to attend the UP with Science program at the University of Pretoria. I was the only one from our school to attend from that year, because the others didn't submit their forms in time* (P1:DS3).

Participant 2 observed her sister in the home: *the school work...she dropped and dropped and dropped with her marks ... her career shuttered down ... could not become what she wanted to become* (P2:DS4), thus realising that she needed to make a different choice than her sister: *I tell myself that I am not going to become like her ... I push myself* (P2:DS4). Participant 2 consequently became aware of the control she had over her own choices and the consequences of her decisions: *Considering the consequences of my decisions* (P2:DS1), especially regarding a career choice: *Becoming aware of the educational and vocational choices that I must make* (P2:DS1).

Theme 1: Concern

Subtheme 1.2: Anticipation and expectation

The participants' expectation and anticipation of what might happen in the future contributed to their feelings of optimism about the future. Both participants indicated that

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they were *expecting the future to be good* (P1:DS1; P2:DS1). Participant 1 realised that high school brought her closer to her anticipated career: *Hoërskool ... dit is maar net nog 'n stappie nader om my droom te word ... 'n Mikro Bioloog* (P1:DS4). She further expected that academic demands at university would increase and that learning would become more difficult: *Op universiteit is dit weer jy moet meer leer en nuwe goeters leer en voltyds leer* (P1:DS4). Even though she expected that she would need to work hard, Participant 1 looked forward to becoming a microbiologist – this reflected hopefulness for the future. She also expressed high hopes for the current year: *I am also hoping to get the honour of being Dux learner, but we have to wait and see about that* (P1:DS3).

Participant 2 showed eagerness at becoming a medical doctor: *Wanting to become a medical doctor* (P2:DS3), *my life dream was to become a medical doctor* (P2:DS4). Due to her Grade 11 marks she had to change her expectation for the next year: *Last year I had a problem with ... Maths and Physics ... I apply with my grade eleven marks, so now each university is thinking now they can accept me for BSc* (P2:DS4). Even though her expectations had to change, she realised that she could still reach her dream of becoming a medical doctor: *the course of medicine is six or seven years and now I have to add more years so that it can happen* (P2:DS4).

Theme 1: Concern
Subtheme 1.3: Future orientation

Setting and pursuing goals constituted a significant element of this subtheme. Furthermore, both participants directed their thoughts and activities towards the future. Participant 1 set specific goals for the future: *My goal is to have a PhD in microbiology* (P1:DS3), *op die oomblik ... genetiese ingenieur* (P1:DS4). Thus, besides thinking of short-term goals, she also considered long-term goals. Moreover, she directed her activities towards keeping various possibilities open for the future: *En dan het ek deesdae die neiging om Wiskunde te wil gaan swot, soos 'n ekstra vak* (P1:DS4). *Wel ek het gedink aan om te gaan vir 'n CA of so iets of andersins Finansiele Wiskunde, want ek weet nie, Rek en Wiskunde is vir my lekker (as a backup plan)* (P1:DS4).

Participant 2 stated her considerations in becoming a medical doctor, thus orientating herself towards the future: *I think first of all it because of the inspiration from*

my aunties, because both of my aunties are medical doctors and I think it is for the love of helping other people and I also think it was influenced by my sister (P2:DS4). She showed an awareness of the transition that awaited her: *The next transition which of course I am about to go through is of course to go out of school and go into varsity for medicine* (P2:DS4). She further recognised that her current marks did not allow her to enter medicine: *(1.2) Last year I had a problem with ... Maths and Physics ... I apply with my grade eleven marks, so now each university is thinking now they can accept me for BSc* (P2:DS4), thus orientating herself to consider a different alternative: *So I think tomorrow I am going to tell them what will happen if I do not make it into medicine what is the best BSc course that I should do that if even during the year I can get in* (P2:DS4).

Theme 1: Concern
Subtheme 1.4: Planning and preparation

Planning indicates purpose and consideration to do something, while preparation indicates deliberate action. Based on the responses provided by the participants, it seemed that participant 1 was showing more planning and preparation compared to participant 2. Participant 1 took responsibility for taking action to prepare for her future: *I am almost done with my matric year and starting to prepare for end exams, as well as for next year* (P1:DS3). She also planned to continue studying until she got her doctorate, which she perceived to take approximately ten years: *Dan wil ek ook verder swot tot ek my Doktors graad kry wat seker so tien jaar in geheel gaan wees* (P1:DS4). Planning is a priority for participant 1: *Planning important things before I start* (P1:DS1) and *planning how to achieve my goals* (P1:DS1).

Participant 2 expected that the course of medicine might take her longer, which also shows her planning for studying more years in order to become a medical doctor *(1.2) the course of medicine is six or seven years and now I have to add more years so that it can happen* (P2:DS4).

Theme 2: Control
Subtheme 2.1: Decision making

A decision is made after various alternatives have been considered. Both participants considered career options early in high school, therefore when it was time for subject choices in Grade 9, both chose subjects that would allow them access to their chosen careers: *Ek het ook al my vakke gekies vir dit wat ek wil swot* (P1:DS4), *that time of the year had come when we have to choose our major subjects ... I took science related subjects* (P2:DS3). They further indicated that making decisions was essential to them: *Making decisions by myself* (P1:DS1 and P2:DS1), and *learning how to make better decisions* (P1:DS1 and P2:DS1).

Participant 2 in particular often considered the choices she had and based her decision on various alternatives regarding different aspects of her life. Friendship: *I started seeing right from wrong and choosing friends that lifted me uphill instead of down hill* (P2:DS3). Finances regarding tertiary education: *I took a decision that was not just based on my marks, but that was also based on financial matters, because if it happened that I did not get a bursary my parents cannot afford my school fees* (P2:DS4). Responsibility for her future: *(Referring to sister) She could not become what she wanted to ... I tell myself that I am not going to become like her* (P2:DS4). After realising that she would not be allowed to start with Medicine due to her Grade 11 marks being too low, she realised that further decisions needed to be made: *I need to take a decision on do I want to be a medical doctor or do BSc* (P2:DS4), *I must make a decision on which course I want to do* (P2:DS4). She further realised that it might take her longer to finish studying if she started with BSc and then went to Medicine, but she decided that even though it might take longer she still wanted to do it: *it is all about choices ... be able to settle for extra more years* (P2:DS4).

Theme 2: Control
Subtheme 2.2: Individual responsibility

Both participants realised their individual responsibility and they depended on themselves for their own personal benefit. Participant 1 stated that she herself was accountable for her future: *Taking charge of my future* (P1:DS1). She took charge of her

tertiary studies in order to prepare for her future career: *I can't wait until then (next year), because next year I will start studying for my BSc degree in microbiology* (P1:DS2); *ek het aansoek gedoen daarvoor* (P1:DS4); *ook het ek aansoek gedoen vir beurse* (P1:DS4); *ek gaan omtrent vir so vier jaar voltyds swot* (P1:DS4). She further anticipated what to expect the first day at university: *(As eerste dag instap by Universiteit)… ek sou probeer seker maak dat ek weet waar wat is, sodat ek nie verdwaal langs die pad nie* (P1:DS4).

Participant 2 indicated that she had become aware of her individual responsibility very early in her life: *For me, school was more than just education. I saw it as an opportunity to learn other children's cultures as well as to teach myself to interact with all different kinds of people* (P2:DS3). Achieving high marks was imperative: *I knew whether I achieve or not was going to be up to me* (P2:DS3); *I push myself until I get my grades* (P2:DS4) – therefore *this required more effort on my school work* (P2:DS3). *I started doing homework every night after the children went to bed, around 10pm, if I had lots of homework I would sometimes sleep at 2 am, then again waking at 5am preparing for yet another day at school* (P2:DS3). Participant 2 became conscious about *taking responsibility for my actions* (P2:DS1) and *counting on myself* (P2:DS1), therefore her focus became clear and guided her to achieve her goal of becoming a medical doctor: *I started concentrating basically on three only, which is Life Science, Maths and Physical Science* (P2:DS4) realising that *without these subjects I cannot become what I would like to become* (P2:DS4). *I took the efforts for what I didn't understand to go to other teachers* (P2:DS4), *I was also attending Saturday school* (P2:DS4) *for these three subjects just to make sure I got that minimum mark* (P2:DS4).

Theme 2: Control
Subtheme 2.3: Persistence and patience

The participants indicated that *being persistent and patient* (P1:DS1 and P2:DS1) was significant in their lives. Participant 1 showed persistence and patience in primary school when she was elected as a media prefect by helping other children to find what they need: *I enjoyed helping kids find the books they needed for tasks* (P1:DS3).

Looking forward to tertiary studies she indicated that she intended to keep on studying: *Tot ek my Doktors graad kry wat seker so tien jaar in die geheel gaan wees* (P1:DS4).

Participant 2 observed her sister overcoming difficult circumstances: *Because my sister was still studying (and had a baby), I, well we thought it would make her not finish her studies but everyday she tries harder and harder to succeed* (P2:DS3). Consequently participant 2 pushes herself to overcome difficult circumstances: *School was becoming almost impossible to survive. With the noise of the children at home and the workload at school ... I started doing homeworks every night ... my body adapted to this routine and my brain could now function better during the late night than in the afternoon* (P2:DS3). To achieve her goal of becoming a medical doctor, she worked very hard: *I push myself until I get my grades* (P2:DS4). She also persisted to improve her marks by attending extra class: *Saturdays I was also attending Saturday school* (P2:DS4). The realisation that her Grade 11 marks would only allow her to study BSc did not discourage her: *It became apparent that I want to become a medical doctor I think I was ready to be able to settle for extra more years* (P2:DS4). She was prepared to persist with studying hard: *What I'm certain is that ... I can come for BSc for just one year and after that one year if my Science marks upgrade then they can take me to medicine* (P2:DS4). She was prepared to wait patiently until she would get the opportunity to study Medicine and reach her goal of becoming a medical doctor.

Theme 3: Curiosity

Subtheme 3.1: Investigative (observing)

This subtheme includes considering possibilities and seeking information before making a career choice *Investigating options before making a choice* (P1:DS1), *uitgevind watse velde is daar en wat presies daar gebeur* (P1:DS4) or seeking information after a tentative career choice was made: *Soos watse vakke ek volgende jaar moet vat en hoeveel ek moet hê vir al daai vakke* (P1:DS4); *I tried reading the brochures ... then I saw that BSc has ... different sections* (P2:DS4). What is evident is that participants wanted information: *I only need more info* (P2:DS4) and *ons was net meer ingelig* (P1:DS4). The participants tried to gain as much information as possible before considering alternatives: *Searching for information about choices that I must make*

(P1:DS1 and P2:DS1). Information was often acquired through research: *En dan ook ja, het ek maar navorsing gedoen oor alles om te weet wat gaan vir wat* (P1:DS4); *dit klink vir my die beste uit die navorsing wat ek gekry het* (P1:DS4). Furthermore, both participants went to training institutions to ask questions and observe different ways of doing things: *Go to that specific institute and ask about the courses* (P2:DS4). *We also got to see what the departments do and what they entail (at UP)* (P1:DS3); *gedurende die program het ek gekyk toe hulle ons vat na die Mikro biologie afdeling toe* (P1:DS4).

| Theme 3: Curiosity |
| Subtheme 3.2: Exploring (doing) |

Exploration involves participants taking part in activities: *I enjoyed learning all the new things* (P1:DS3); *throughout my primary [school] life I participated in various activities* (P2:DS3). They specifically took part in activities for the purpose of considering similar activities as part of a career. Participant 1 took part in various activities: *In grade 10 my science teacher ... nominated me to attend the* UP with Science *programme at the University of Pretoria* (P1:DS3). During the course of the UP with Science programme she explored diverse activities: *Het ons by hulle chemistry en engineering dingetjies gedoen* (P1:DS4). For example: *We studied potato diseases ... to help eradicate these pathogens* (P1:DS3); *ons moes 'n klein modeletjie bou wat met solar energie werk ... dan het jy nou byvoorbeeld resies jaag met die ding* (P1:DS4); ... waar ons nou drie verskillende stowwe vat ... wat ons moet skei (P1:DS4).

Participant 2, wanting to become a medical doctor, also took part in various activities: *I love medicine ... I thought of taking the course for first aid ... it also gave me a preview* (P2:DS4), therefore: *because of wanting to become a doctor, I volunteered to be in the schools first aid team* (P2:DS3); *we attended a course ... where the nurse taught us all the ethics and basics of first aid* (P2:DS3). Furthermore, participant 2 knew that she needed to improve her marks to be able to qualify for Medicine, for that reason she took part in an academic camp: *During September, the first week that school opened I went with all the kids ... for a camp ... it was the top twenty from each school that was chosen* (P2:DS4). She focused especially on the most important subjects:

During the night when it was study sessions we did Physical Science, Math questions, Life Science questions (P2:DS4).

Theme 3: Curiosity
Subtheme 3.3: Relationship building

Building relationships seems to be important to participants. These relationships could be utilised as a coping resource when faced with new or unfamiliar circumstances: *Want dan leer jy ook van nuwe goeters en jy leer die mense ken, dan kan jy by hulle hoor wat doen jy en so aan* (P1:DS4). Both participants recognised people as a resource of information: *So baie keer as ek inligting kort oor iets dan help dit nogal, want dan kan ek met haar (Ma) vriende gaan praat* (P1:DS4). *If I do it on my own, I might make a mistake and choose an[d] incorrect course* (P2:DS4).

Participant 1 indicated that her experience of the change from primary to high school was influenced by the small number of people she knew: *Some days were fun, but I didn't really enjoy other days. Maybe it was because I only knew a few people who came with me from primary school?* (P1:DS3). She showed enthusiasm about meeting new people and looked forward to the prospect of entering university: *During the next three years at UPSci, I met many new people from a variety of schools* (P1:DS3).

Participant 2 indicated that the change from primary to high school was challenging, especially because she knew nobody when she entered high school: *I knew no one who attended there* (P2:DS3); *I became quiet and not talking to other kids, I think it was because I didn't know anyone* (P2:DS4). Anticipating the challenge she might face when entering university, she indicated that knowing other people might contribute to this changeover (between high school and university) being experienced far more positively: *(Children met at academic camp) We also exchanged numbers, saying that we should meet next year at certain universities ... by doing that, maybe next year I know that we are going to communicate* (P2:DS4); *I know that if it happens that I go to university that one or two of them will be there and it will be much more easier for me being a new year student that there are the three of us and we are facing the same course* (P2:DS4).

Theme 4: Confidence

Subtheme 4.1: Pride and self-belief

Pride includes feelings of satisfaction and pleasure derived from academic accomplishments. Both participants showed confidence in their own cognitive ability and indicated pride in their academic accomplishments. Participant 1 indicated that she perceived herself to be stronger academically since entering high school: *Ek was nie so sterk in akademies gewees soos wat ek nou is nie, in laerskool nie, maar ek was nog redelik goed gewees* (P1:DS4). However, from high school she started to excel academically: *I once jumped from sixth to second place to first (on Top Ten Achievers)* (P1:DS3); *from grade 8 up until now I have been on the Top Ten Achievers of our school* (P1:DS3). She highlighted her Grade 11 year as the year during which she especially derived pleasure from her academic achievements: *In my grade 11 year I got 5 trophies at our yearly achievement evening, the person who awarded the trophies even made the joke to say that I should basically take the whole table with me for my arms aren't big enough to carry all the trophies!* (P1:DS3). Being in Grade 12 now, she also expected to get awarded for her academic achievement: *This year I am again getting 5 trophies; for best achievement in Science, Math, Biology, Afrikaans and Accounting* (P1:DS3). With regard to tertiary study, she expressed her self-belief by indicating that her high marks allowed her entry into many study courses: *Maar ek kan eintlik op die oomblik amper in enige iets in kom, my punte is so hoog* (P1:DS4). Various occurrences also indicate her confidence in her own cognitive ability: *Accepted at UP* (P1:DS2); *Ek het geleer dat ek vêr bo daardie telling is (M-telling)* (P1:DS4); *Dit het my ook net gewys wat ek kan doen* (P1:DS4); *Ook kan ek sê so bietjie meer confident oor dit wat ek wil gaan doen* (P1:DS4).

Participant 2 told of the pleasure that she derived from her academic achievement from early on in primary school: *Got gold ribbon for academic until grade 5* (P2:DS2); *(Grade 7) I received a platinum ribbon which was the highest you could obtain at primary level and only if you had an average of 90% or more* (P2:DS3). In high school she continued to show satisfaction with her academic achievement: Honorary colours academic (Grade 10, 11, 12) (P2:DS2); *become first place on the academic team* (P2:DS3). She was confident of her cognitive ability, and expected to be able to

graduate from university: *I'm certain I will go there for a certain course (to university)* (P2:DS4); *I know in 7 years time, I will get a chance to wear formal clothing when I graduate for my degree at MBChB* (P2:DS3).

Theme 4: Confidence
Subtheme 4.2: Trustworthiness

Being dependable is what indicates trustworthiness for the participants. It implies that the individual is reliable and other people can also have confidence in the participants. Trustworthiness as a subtheme mainly emerged from data set 1 for both participants and is supported by the following quotes: *Performing tasks efficiently* (P1:DS1 & P2:DS1); *Being dependable – doing what I say I will do* (P1:DS1 & P2:DS1); *Working to the limits of my ability* (P1:DS1 & P2:DS1); *Being conscientious* (P1:DS1 & P2:DS1).

Theme 4: Confidence
Subtheme 4.3: Ability to overcome challenges

Overcoming challenges was considered important to participants in order to be successful in their careers; thus, when faced with difficulties both participants put in great effort to overcome such difficulties: *Overcoming obstacles* (P1:DS1 & P2:DS1); *Solving problems* (P1:DS1 & P2:DS1), and *Doing challenging things* (P1:DS1 & P2:DS1).

Financial challenges faced both participants as far as affording the cost of their tertiary study was concerned. Participant 1: *Tukkies betaal my registrasie gelde wat ook nogal help ... ek kry soos R650 by slaghuis wat ek ook kan gebruik vir boeke ... by my Ma se werk kry ek R 10 000 of iets as ek al my vakke deur kom ... intussentyd sal ek maar 'n lening moet aangaan of iets as daar nog kort* (P1:DS4). Participant 2: *I took a decision that was not just based on my marks, but that was also based on financial matters, because if it happened that I did not get a bursary my parents cannot afford my school fees ... I think there is pressure in getting higher marks [was] just to make sure I get that bursary* (P2:DS4).

Employment challenges following study at university were also considered. Participant 1 expected that studying Microbiology would allow her to overcome work

challenges in the future, because it would allow her to choose from a variety of jobs: *Maar Mikro Biologie is redelik wyd, so jy kan eintlik met enige iets aan gaan wat ook 'n voordeel is* (P1:DS4). Participant 2 indicated that she had achieved the minimum mark for entry into university for Medicine, but that she wasn't satisfied with the minimum mark; she wanted to achieve more: *Because I got the minimum mark I hoped to get the maximum mark* (P2:DS4). Once at university, she intended to overcome the obstacle of not having been accepted for Medicine, so that she still would be able to continue with Medicine if she managed to improve her marks: *Say, I can come for BSc for just one year and after that one year if my Science marks upgrade then they can take me to medicine* (P2:DS4).

Theme 4: Confidence
Subtheme 4.4: Learning took place

In this instance, learning refers to learning for individual growth: *Learning from my mistakes* (P1:DS1 & P2:DS1). It also refers to acquiring new knowledge or skills or modifying existing knowledge or skills: *Learning new skills* (P1:DS1 & P2:DS1).

Participant 1 indicated that she had learned from experiences in her life and she regarded her future to be full of possibilities: *Thus I end one chapter of my life and store it on the shelf of my life, there to be read whenever, but never to be relived. But this is not negative, this is positive; for I am starting a new chapter with endless possibilities* (P1:DS3). She pointed out that she had acquired knowledge throughout her life: *Learning all the new things* (P1:DS3); *I love being around books* (P1:DS3), and that she had acquired various skills by participation in activities: *Grade 1 year ... I started playing hockey* (P1:DS3); *[went on] team building excursions* (P1:DS3).

Participant 2 showed personal growth by learning from the mistakes of her sister: *When my sister was in high school she really wanted to become a medical doctor ... but in deciding I didn't know if it was because of not understanding the school work or if it was her not being able to adapt to the new environment ... I told myself that ok fine, so someone in our family wants to become a medical doctor ... so it is going to be me* (P2:DS4). Furthermore, attending a youth camp especially allowed her personal growth: *From the camp, my value changed* (P2:DS3). A teacher played an important role in her

life as far as personal growth was concerned: *A science teacher from our school ... telling me not to worry about not being chosen and that I should use my anger/disappointment to become first place on the academic team. Took his advice and I guess it worked and [is] still working* (P2:DS3). She acquired diverse knowledge and skills as learning took place, especially through her love for reading: *Reading became a priority and my love for reading developed ever since* (P2:DS3); *I grew up where music was the fruit of life. Through that I developed a skill of dancing* (P2:DS3); (speaking with confidence) *1st place speech competition (x3 again)* (P2:DS2) and *reading ... required fluency, facts and a quick pace* (P2:DS3).

4.5. INTERPRETATION AND SYNTHESIS OF THE DATA

In the following section, the findings of the qualitative research are discussed and compared with relevant literature. Findings were synthesised during a process aimed at answering the questions posed in the current study. In order to enhance the validity of the study's findings, various methods of data collection and analysis were employed. Thus the different results were combined into a harmonious whole through a process referred to as crystallisation, thereby enhancing the trustworthiness of qualitative research (Maree & Van der Westhuizen, 2010). According to Nieuwenhuis (2010c) the findings in a research study are those that crystallised from the data gathered.

4.5.1 Theme 1: Concern

Participants realised that they were ultimately responsible for choosing their future careers, therefore they were acutely aware of the choices they had to make. Both participants already came to this realisation early in high school when they had to consider possibilities for the future. According to Hartung et al. (2008), career concern prompts the establishment of possible futures, as was the case with the participants. Anchored in hope and feelings of optimism (Hartung, 2007; Savickas et al., 2009), both participants expected that their future would be good and considered what their lives would be like within a certain time perspective (Savickas et al., 2009) set for reaching their career goals (Participant 1, a genetic engineer having studied Microbiology; Participant 2, a medical doctor).

Regarding the time perspective mentioned above, Pollard (2008) found that future planning and expectancy of Afrikaans-speaking adolescents in South Africa are limited to what they want to do for the following one or two years in their lives. The present study, however, revealed the contrary. Participant 1 (white, Afrikaans-speaking adolescent) indicated that her goal was *to have a PhD in Micro Biology and one day becoming a generic engineer* (P1:DS3). Further indications of long-term planning emerged from her remarks: (P1:DS4): *Ek gaan vir so vier jaar voltyds swot, dan wil ek ook verder swot tot ek my Doktors graad kry wat seker so tien jaar in geheel gaan wees, dan gaan werk soek as 'n Mikro Bioloog verkieslik in Genetiese Ingenieurswese, ek sal miskien moet spesialiseer dan sal ek kyk watse gedeelte waarin is daar aanvraag en dan sal ek heel moontlik daarin gaan spesialiseer en ek het nou die dag gelees in Australia is daar 'n hele plan wat binne die volgende vyf jaar of so ontwikkel gaan word, waar hulle Mikro Bioloë gaan kort*. The occurrence of subthemes such as choice awareness (1.1), anticipation and expectation (1.2), future orientation (1.3), and planning and preparation (1.4), shows that participant 1, who was a top academic achiever, displayed characteristics of career adaptability which could then be suggested to be the contributing variables for future planning and expectancy as mentioned earlier by Pollard (2008).

As an individual becomes concerned about the future, he/she is guided to look forward and prepare for what might come next (Savickas, 2008). Individuals who employ their adaptability skills think about and plan for their future, while knowing how to achieve realistic goals (Ebberwein et al., 2004). Nel, Troskie-de Bruin and Britzer (2009) mention that subject choices in Grade 9 constitute the basic point of departure when an individual plans and prepares for higher education. This is proved by the fact that both participants duly considered their subject choices, as confirmed by the following quotes: *Ek het ook al my vakke gekies vir dit wat ek wil swot* (P1:DS4); and *that time of the year had come when we have to choose our major subjects ... I took science related subjects* (P2:DS3).

Furthermore, participant 1 was planning not only her studies of the following year, but also until she finished her doctorate. When the study was conducted, she was also preparing for her final Grade 12 exams in preparation for further studies that would

follow. Participant 2 became concerned with her studies as she was not from the outset allowed to study medicine; consequently she was prepared to study for a longer period of time if it would eventually guide her towards reaching her goal. Closely related to adolescents' adjustment is career preparation in adolescence (Skorikov, 2007 in Hirschi, 2010) and this was demonstrated by both participants. Participants were concerned about their future. They anticipated change and reacted when such change occurred, which is characteristic of adaptive individuals (Ebberwein et al., 2004). The participants in this research study showed concern about their study and future career, which forms part of the four dimensions of career adaptability.

4.5.2 Theme 2: Control

Participants made various decisions in order to allow for many opportunities to consider career options. Control, as stated by Hartung (2007:110), *involves increasing self-regulation through career decision making and taking responsibility for ownership of the future.* Since both participants referred to the importance of making the right decisions, it can be deduced that both participants were taking responsibility for their future by the decisions they made.

Participants indicated how important it was for them *to be able to depend on themselves, to take individual responsibility and to confirm ownership of their chosen futures* (Hartung et al., 2008:72). They concluded that assuming individual responsibility would be an advantage to them; they would use *self-regulating strategies to adapt to different settings, but especially to exercise some sort of influence and control over the settings themselves* (Savickas et al., 2009:7).

The fact that they faced external pressure (e.g. financially) affected individuals' view on the prospects of negotiating change (Ebberwein et al., 2004). Participants indicated the importance of having sufficient financial resources for tertiary study; consequently both indicated that they took control of their academic achievement by obtaining high marks in an attempt to attain bursaries from various institutions. Ebberwein et al. (2004) argue that individuals who consider personal and contextual factors when changes occur have a head start when change arises.

According to Savickas (2008:8), *control enables individuals to become responsible for shaping themselves and their environment to meet what comes next by using self-discipline, effort and persistence*. Participants indicated that in order to reach their goals they would pursue them persistently and patiently, even though difficulties might arise. This indicates that individuals value control highly as one of the dimensions of career adaptability.

4.5.3 Theme 3: Curiosity

Individuals with a sense of planning and realism are more likely to seek accurate information for guidance in times of change and transition (Ebberwein et al., 2004). Participants indicated that having complete, current and reliable information about future choices was imperative (Zikic & Klehe, 2006) and contributed positively to their career planning. Therefore, participants attempted to gain as much information as possible before considering alternatives for the choices they needed to make. Information was obtained through research (not indicating the sources), but before making a decision the participants went to the university of their choice (seen as a reliable source of information) to get the best possible information. They indicated that having the necessary information contributed to their being more confident when making choices.

When individuals consider starting a career, it is an ideal time to nurture adaptability through partaking in various activities aimed at gaining relevant work experience. By doing so, individuals are able to explore their dormant abilities and acquire new skills (Van Vianen et al., 2009). In the present study, the inclusion criterion for exploration (subtheme 3.2), involved taking part in activities for the purpose of considering the possibility of doing similar activities as part of a career (Table 4.6). I based this inclusion criterion on the work of Savickas et al. (2009) who indicated that the curious person shows active exploration behaviours; the participants in my study are therefore identified as being curious because they participated in various exploratory activities throughout primary and high school.

Taking part in extracurricular activities for fun, on the other hand, without the purpose of considering such an activity as part of a career formed part of the exclusion criteria for exploration (subtheme 3.2; Table 4.6). Research by Covay and Carbonaro

(2010) nevertheless proved that extracurricular activities improve students' non-cognitive skills. Through their research the classroom was identified as an area where cognitive as well as non-cognitive skills can be developed. Moreover, extracurricular activities constituted the other area identified. Participation in extracurricular activities is important because it provides the opportunity for learners to practise and develop non-cognitive skills, which are important for learning and employment outcomes (Covay & Carbonaro, 2010). Thus, all extracurricular activities can be considered as contributing to 'curiosity' as one of the dimensions of career adaptability.

Frick (2007b in Nel et al., 2009) suggests that good academic preparation at school directly correlates with academic success at university. Various other studies have shown that individuals are increasingly underprepared for further studies and it is therefore suggested that prospective students should purposefully be prepared for further study (Foxcroft & Stumph, 2005; Kivilu, 2006; Tinto, 1993 in Nel et al., 2009). Nel (2006 in Nel et al., 2009) recommends that 'the necessary skills' should be developed at school to cope with challenges. During the research of Nel et al. (2009) factors such as academic, social, financial, university expectations, and cultural factors was explored.

The studies referred to in the previous paragraph failed to make mention of the possible role of extracurricular activities as contributing factors to career adaptability. During my research study, on the other hand, it clearly emerged that extracurricular activities contribute to the development of non-cognitive skills. These skills were evidently important for the participants' learning and employment; thus I came to the conclusion that the combination of cognitive skills (developed through academic achievement) and non-cognitive skills (learned and developed through participation in extracurricular activities) as was done by both participants, contributed optimally to career adaptability. In my view, the 'necessary skills' suggested by Nel (2006 in Nel et al., 2009) could well refer to career adaptability, as I consider the latter as a necessary skill that could be developed to cope better with changes.

Furthermore, relationships played an important role in participants' lives. Both participants indicated how difficult they experienced the transition that took place from primary to high school, due to their not knowing many people in high school. Those statements from the participants led me to consider the importance of relationship

building. Hirschi (2009) confirms that supportive social relationships can be seen as a predictor for career adaptability in adolescence. Consequently new relationships formed by the participants were identified as a coping resource (Yang, 2004) that could be utilised when participants were faced with unfamiliar circumstances or transitions. Established friendships and family ties were not initially identified as resources for coping when faced with changes (they formed part of the exclusion criteria). Literature on the other hand offers many examples of the importance of social support, including friends, family, parents and teachers (Hirschi, 2009; Kenny & Bledsoe, 2005; Yang, 2004). According to Creed, Fallon and Hood (2009), social support from the educational institution, the workplace, family and friends lessens the stress for individuals when they are faced with career concerns. Therefore, all supportive relationships can be considered as a resource for coping when an individual is faced with changes and new situations.

4.5.4 Theme 4: Confidence

The two participants in the current study indicated that when they were faced with challenges, overcoming obstacles and solving problems were important to them. Furthermore, they demonstrated their confidence in their own cognitive ability through acquiring the necessary problem-solving skills. They also derived pleasure, satisfaction and pride from their academic accomplishments, hence contributing to their self-belief (Hartung, 2007:110). Hartung et al. (2008:72) argue that *confidence empowers individuals to construct a preferred future and overcome obstacle,* confirming once again the significance of the confidence the participants showed in themselves.

In relating confidence to career adaptability, the following findings from other research studies are considered next. Mumford et al. (1993) found that individuals who are concerned with accomplishment, especially on challenging tasks, generally applied their intellect so as to get something done, which would result in their becoming more adaptive individuals. Ackerman (1987) and Murphy (1989) (both in Mumford et al., 1993) indicate that people's ability to adapt to changing circumstances are influenced by intelligence and cognitive capacity; thus intelligence plays a vital role in adapting to different task demands. The participants in my study can therefore be seen as adaptive

because of their top academic achievement, their belief in their own cognitive ability and their confidence in problem-solving skills. All these were applied to cope with challenging tasks or changing circumstances in their efforts to be successful.

There is a strong relationship between education and adaptability. In all probability, any increase in education contributes to an increase in cognitive complexity – therefore an increased ability to navigate changes (O'Connell et al., 2008). In order to adapt to frequent changes that occur in the world of work, it is essential for individuals to develop not only job-specific skills, but various knowledge and skills as adaptive orientation to changes (Griffen & Hesketh, 2003). Learning took place in the individuals' lives through personal growth, their acquisition of new knowledge and skills, or their modification of existing knowledge and skills. Therefore, the participants learned from various activities, which contributed to their confidence in employing what had been learned in other circumstances. One of the working assumptions in Chapter 1 denotes that the possibility exists that adaptability may be teachable. A primary aim of career construction counselling (the theoretical framework for this research study) is to increase career adaptability (Savickas, 2002a in Hartung et al., 2008). Considering how learning took place for the participants and how they felt more confident in using what had been learned in other situations, I conclude that the various dimensions of career adaptability can indeed be facilitated.

Benso, Finegold and Mohrman (2004, in Carless & Arnup, 2011) propose that learning new knowledge and skills that are required when individuals enter a new career is coped with better by individuals with higher levels of formal education, thus facilitating a better transition to a new career. I therefore conclude that the participants in this research study, who were both top academic achievers and on the verge of starting their further education at university, should be able to facilitate a better transition when a change occurs, especially a career change. Their capacity to adapt to a new career (career adaptability) should enable a smooth transition between different careers.

4.5.5 General findings of this research study

4.5.5.1 Career adaptability contributes to the ability to negotiate change

As found in the literature and confirmed by the findings based on data collected in this research study, career adaptability is an important part of negotiating change. In the case of the participants in this research study, it was especially the change from high school to university had to be negotiated. This finding is supported by the literature presented below.

The transition from school to university is often strenuous and often individuals do not finish tertiary education programmes (Parker, Summerfeldt, Hogan & Majeski, 2004). As a result researchers have investigated factors that have an impact on academic success at university level by looking at academic achievement at high school. Such achievement, demonstrated by marks, is then seen as a predictive measure for success at university. The predictive utility of academic achievement has nonetheless proved to leave many other variables unexplained (Berger & Milem, 1999; Johnson, 1997; Mayer & Salovey, 1997; Murtaugh, Burns & Schuster, 1999; Randsell, 2001 in Parker et al., 2004). Therefore, many other variables have been considered: full- or part-time attendance, employment status, being a member of an ethnic minority, family obligations, distance from hometown, financial concerns, gender, teaching strategies, students' motivation, students' approach to studying, interaction between students and the academic and social systems of the university, cultural expectations, and psychosocial factors (Bartz & Miller, 1991; Ginsburg, 1992; McKenzie & Schweitzer, 2001; Meyer, 1990; Parker et al., 2004; Talbot, 1990; Tinto, 1975 in Fraser & Killen, 2003). Career adaptability is not mentioned as an important variable by any of these researchers.

Parker et al. (2004) nevertheless found that several dimensions of emotional intelligence, especially adaptability, proved to be a significant predictor of academic success. This, together with the findings derived from my research study, strengthened my belief that career adaptability contributes to success when changes or transitions occur.

Imel (2002) suggests that constructivism, adaptability and planned happenstance support the development of careers for meaningful life work for individuals, which might

confirm a belief in the contribution of these factors to success in careers. Contrary to the findings in my research study, Imel (2002) denotes that a concept such as adaptability has a middle-class orientation, which does not address gender, class or race. In my research study participants were from different races (white and black) and different socio-economic circumstances (participant 1, the only child and both parents working; participant 2, the second of four children in the home and the father being the sole financial contributor). My study could possibly prove Imel (2002) wrong in that adaptability incorporates various factors, including class and race. Gender influences were also mentioned above, therefore the influence of gender on career adaptability will be discussed next.

4.5.5.2 Gender influences career adaptability

Both participants in my research study were female. Purposive sampling was done in choosing the top two academic achievers in Grade 12 in a specific high school in Pretoria, which coincidentally resulted in both participants being female. Various research studies have incorporated gender in their attempts to explain career adaptability. According to Patton and Lokan (2001) as well as Patton, Bartrum and Creed (2004) the results on gender differences are inconclusive. Hartung, Porfeli and Vondracek (2004) found that adolescent girls scored higher on the construct 'career maturity/adaptability' than did their male counterparts. O'Connell et al. (2008) found a significant relationship between gender and adaptability, with women being more adaptable than men. The research conducted by Kenny and Bledsoe (2005) revealed a modest (not significant) contribution of gender to career adaptability, while Hirschi (2009) established that gender did not affect career adaptability development at all. Carless and Arnup (2011) argue that males are more likely to change careers, which should suggest that males are more flexible than females. All of this proves that research findings are inconclusive regarding gender differences in career adaptability.

The findings in my own research point to the presence of career adaptability with both participants. Hence it is derived that a significant relationship exists between top academic achievement and career adaptability, and not so much between gender and career adaptability. Furthermore, since both participants were female, gender could well

be considered as a factor that contributes to career adaptability seeing that both (female) participants displayed strong signs of career adaptability. Whether or not males will fare worse than females in respect of career adaptability and top academic achievement remains an open question that needs to be investigated.

4.5.5.3 Participants display behaviours of effective career adaptability

According to Savickas (2008:20), individuals can adapt more effectively as each career transition approaches, provided that they adopt the following behaviours:

- *Growing awareness*
- *Information seeking followed by informed decision making*
- *Trial behaviours leading to a stable commitment and projected forward for a certain time period*
- *Active role management*
- *Eventually forward-looking disengagement*

A synthesis of the findings in my research study reveals that the two participants displayed most of these behaviours, as found in the different subthemes. *Growing awareness* is displayed in subtheme 1.1 (choice awareness**)**. *Information seeking followed by informed decision making* is demonstrated in subtheme 2.1 (decision making), subtheme 2.2 (individual responsibility) and subtheme 3.1 (investigative). *Trial behaviours leading to a stable commitment and projected forward for a certain time period* are found in subtheme 3.2 (exploration), subtheme 4.1 (pride and self-belief) and subtheme 4.4 (learning took place). Thus it can be concluded that the participants indeed exhibit career adaptability, which *denotes an individual's readiness and resources for handling current and anticipated tasks, transitions, and traumas* (Savickas, 2008:4). The fact that the participants in this research study (being top academic achievers) displayed the above behaviours identified by Savickas (2008) implies that they will be able to adapt more effectively when changes or transitions occur.

4.5.5.4 Varying contributions are made by the four dimensions of career adaptability

When the occurrences of the themes were considered separately for both participants, my study seems to suggest that a distinct contribution was made by each of the separate four dimensions of career adaptability. Control came out as the strongest contributing dimension for participant 2, whereas for participant 1 it came out as the least contributing dimension (Figures 4.2 and 4.3). Considering the differences between participants 1 and 2, the contributing factors in this instance might be either race (participant 1 being white, participant 2 being black) or socio-economic circumstances (participant 1 coming from a higher socio-economic background, participant 2 from a lower socio-economic background). Research by O'Connell et al. (2008) proved that race was not significantly related to adaptability. My research concurs with the research of O'Connel et al. (2008), that race was not significantly related to adaptability, because both participants displayed strong characteristics of career adaptability. The contribution of race to the varying degree of the contribution of the four dimensions for career adaptability is suggested in my research as an important contributing factor. Covay and Carbonaro's (2010) research on the other hand indicated that higher socio-economic backgrounds contribute to higher levels of academic achievement. My research refutes Covay and Carbonaro's (2010) findings, because participants in my research came from different socio-economic backgrounds and yet they were both top academic achievers. Whereas Covay and Carbonaro's (2010) research does not correlate socio-economic backgrounds to career adaptability, findings from my research suggest that socio-economic backgrounds could be considered as a contributing factor to the varying degree of the contribution of the four dimensions to career adaptability.

Figure 4.2: Visual demonstration of occurrences of themes for participant 1

Concern	38/142	26,76%
Control	27/142	19,01%
Curiosity	38/142	26,76%
Confidence	39/142	27,46%
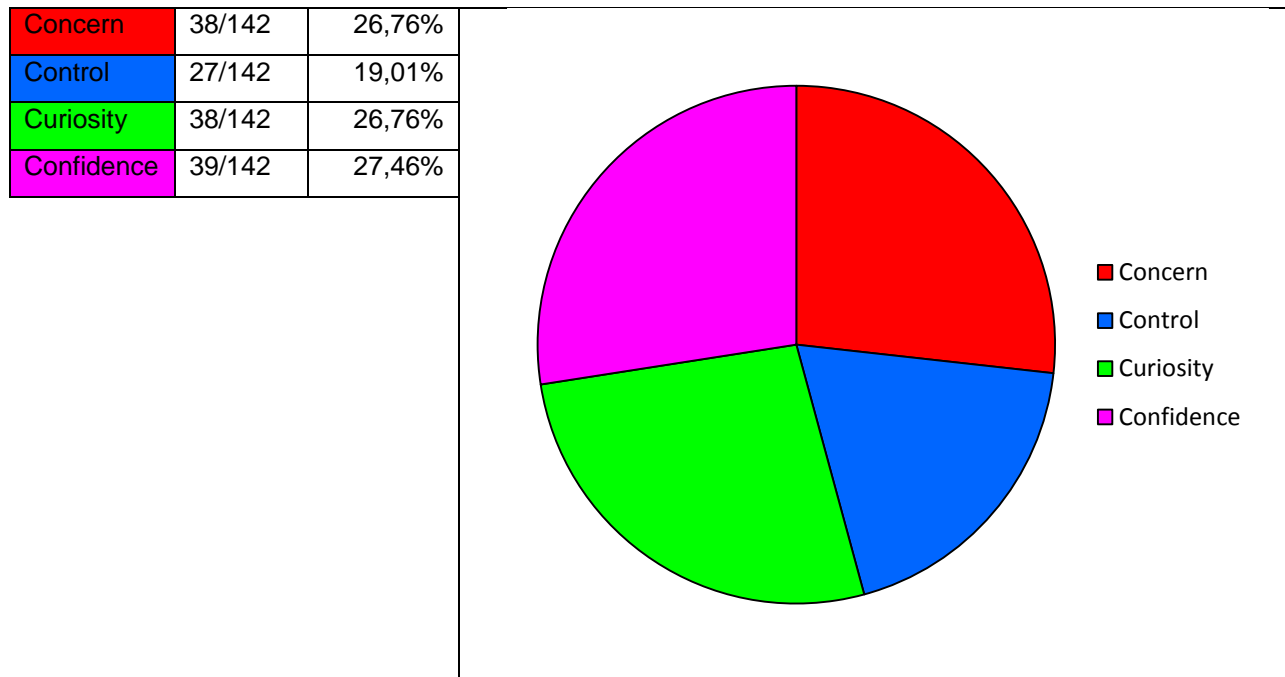
Figure 4.3: Visual demonstration of occurrences of themes for participant 2

Concern	35/171	20,47%
Control	57/171	33,34%
Curiosity	30/171	17,54%
Confidence	49/171	28,65%

98
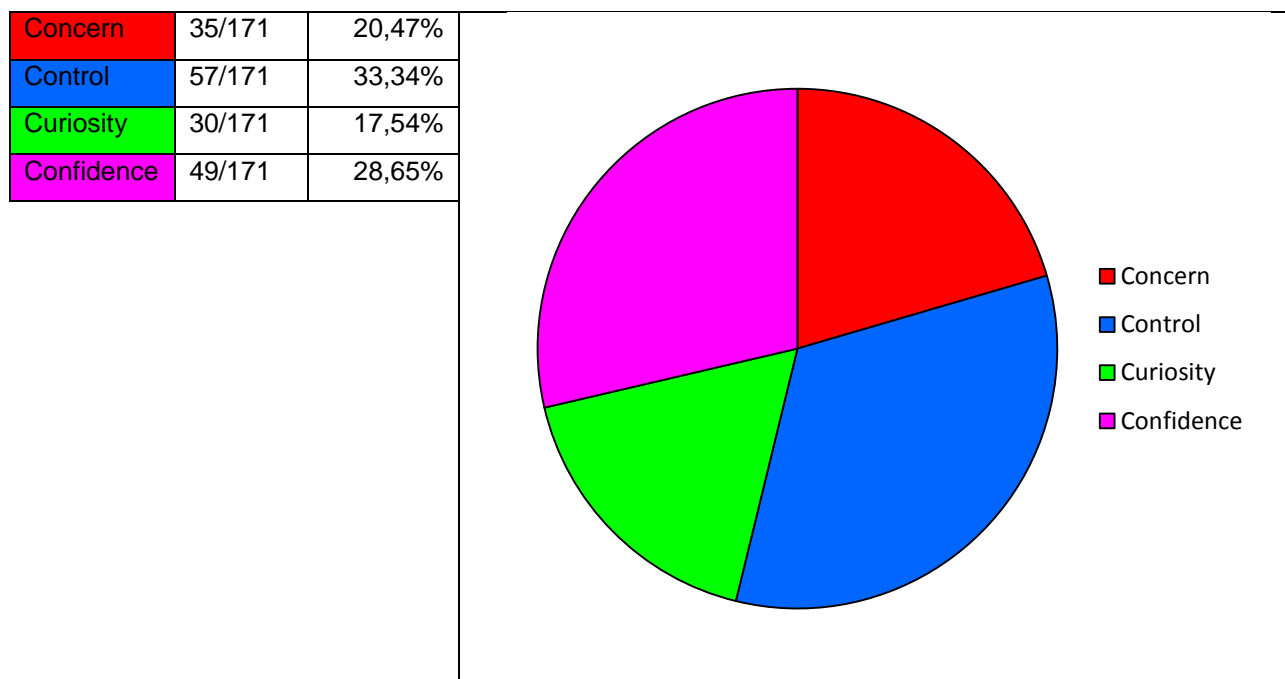
4.5.5.5 The four dimensions for career adaptability are inter-dependable

At the beginning of Chapter 4 (4.3.3) I indicated that I took cognisance of the fact that inter-dependability of themes exists within the full text of data sets. During the data analysis process I also confirmed that inter-dependability exists between subthemes. The inter-dependability of the subthemes as well as the inter-dependability between main themes seems to suggest that the four dimensions of carer adaptability did not follow a linear process, where one dimension precedes of follows another, rather the individual displaying career adaptability displays behaviour relating to various dimensions simultaneously. Therefore, when career adaptability is facilitated, it is impossible to isolate one dimension, due to the inter-dependability of all dimensions.

4.6. CONCLUSION

This chapter provided an overview of participants' background information and the milieu within which research was conducted, so as to provide the reader with a rich description of the context of this research study. Procedures for 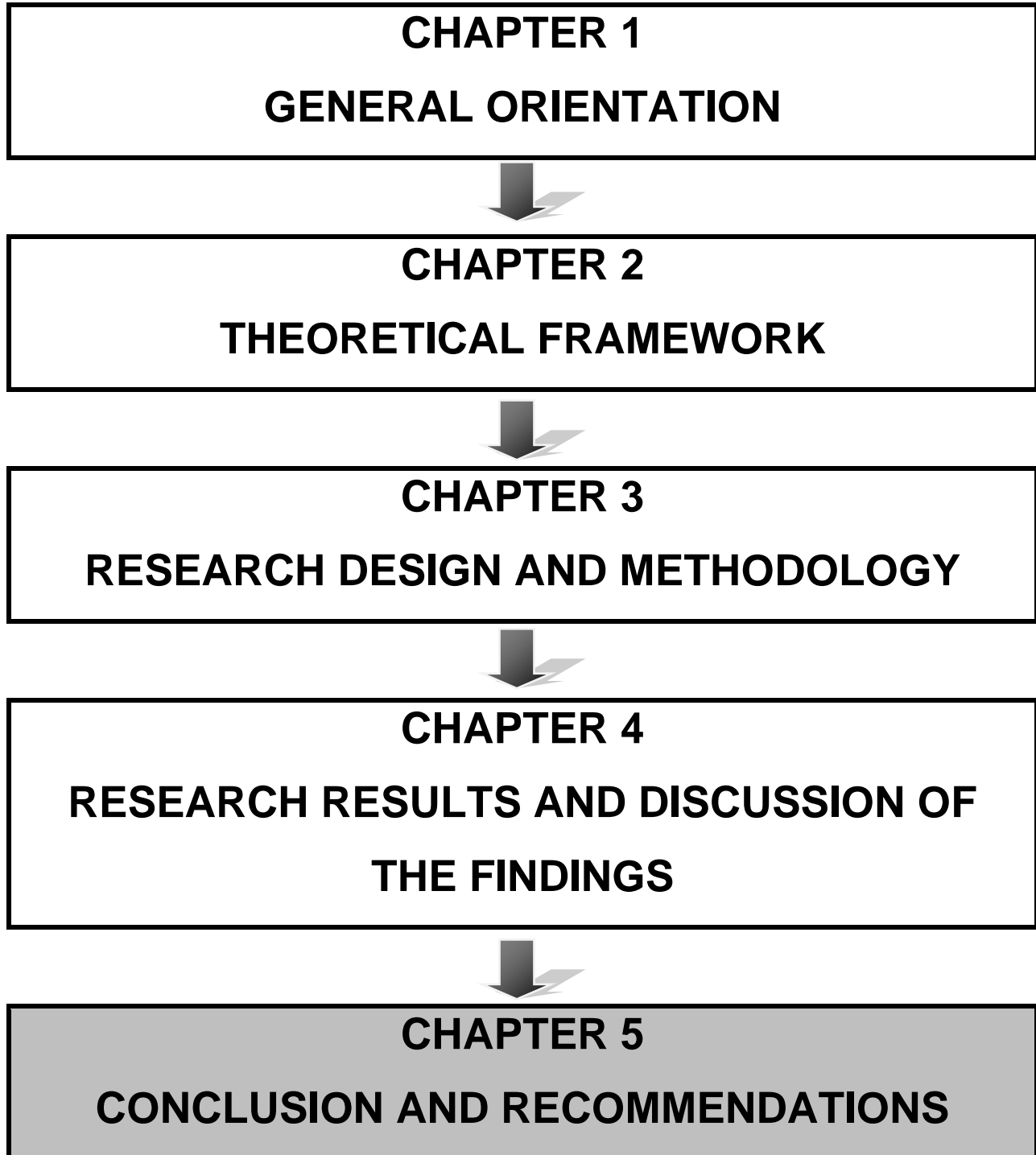identifying themes and subthemes were discussed, after which data was analysed and interpreted in order to explore the relationship between career adaptability and top academic achievement. A detailed discussion followed of the themes and subthemes that emerged through exhaustive analysis of the data. Finally, the results of this research study were discussed in relation to the relevant literature that is available.

CHAPTER 1

GENERAL ORIENTATION

CHAPTER 2

THEORETICAL FRAMEWORK

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

CHAPTER 4

RESEARCH RESULTS AND DISCUSSION OF THE FINDINGS

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

CHAPTER 5
CONCLUSION AND RECOMMENDATIONS

CHAPTER 5 - AN OVERVIEW

In this final chapter I conclude my study by providing a discussion on the findings relating to the research question and sub questions as well as the conclusions of the study. Furthermore, I identify possible limitations and contributions of the study. Finally recommendations relating to research, practice and training are discussed.

5.1. OVERVIEW OF THE STUDY

5.1.1 Chapter 1

In Chapter 1 an overall view of the study was provided. The chapter offered an introduction to the study as well as the rationale for the study. Exploring and describing the relationship between top academic achievement in Grade 12 and certain characteristics of career adaptability were discussed as the purpose of the study. Thereafter a description was given of the primary research question and sub questions. Clarification of key concepts was given in order to provide clarity in relation to adaptability, career adaptability and top academic achievers. Career construction theory was introduced as the theoretical framework of the study. Furthermore, an overview of the chosen research design, methodology and paradigmatic perspective was given. Considerations for quality criteria and ethical aspects were lastly introduced.

5.1.2. Chapter 2

Chapter 2 focused on an in-depth literature review, considering various important aspects of this research study. The most important aspects included moving from adaptability to career adaptability, as well as the importance of academic achievement. Thereafter career construction theory, which constitutes the theoretical framework of this research study, was discussed. Through this in-depth literature review and theoretical framework the a priori codes for identifying the main themes during the data analysis process were identified.

5.1.3 Chapter 3

Chapter 3 offered a detailed discussion and explanation of the research methodology for this research study. The study was undertaken according to an interpretivist paradigm, following a qualitative approach and incorporating a case study design. The study was further described in terms of data collection, analysis and interpretation methods. Additionally, details of the selection of participants and location of the research were explained in order to guide the reader to the context in which the research was done. The chapter concluded with a comprehensive discussion of the ethical considerations and quality criteria contributing to the trustworthiness of the study.

5.1.4 Chapter 4

In Chapter 4 the research results and the discussion of the findings were presented. Procedures for identifying themes and subthemes were explicitly stated followed by a detailed discussion of themes and subthemes. Finally interpretation and syntheses of data were done by integrating the findings with information from relevant literature. thus drawing and presenting the conclusion of this research study.

5.2. ADDRESSING THE RESEARCH QUESTION

I will now attempt to establish whether the research questions have been answered by the results of this research study. In an attempt to understand and support the primary research question, the sub questions were explored and will be discussed first.

5.2.1 Sub questions

- **What are the salient aspects of career adaptability?**

As a result of a comprehensive literature study the following became evident. Career adaptability is represented as an aggregate construct, not as a latent one (Chapter 2, 2.3.4). Therefore, the combined level of the four dimensions of career adaptability and not their shared variance seems to be the appropriate way to conceptualise and measure the multidimensional construct of career adaptability (Hirschi, 2009; Chapter 2, 2.3.4).

Regarding career adaptability it is subsequently not higher levels of career adaptability that lead to higher concern, control, curiosity and confidence, but rather higher levels of concern, control, curiosity and confidence that lead to higher career adaptability (Savickas, 2008; Chapter 2, 2.3.4). Findings from my research study suggested that inter-dependability exist between main themes as well as subthemes. Therefore participants displayed various dimensions (concern, control, curiosity, confidence) simultaneously in data sets, confirming the presence of the four dimensions of career adaptability as contributing to higher levels of career adaptability (Chapter 4, 4.5.5.5). Consequently this established that the salient aspects of career adaptability were concern, control, curiosity and confidence.

- **How can career adaptability help children and adolescents negotiate career-related transitions?**

Certain characteristics seemingly need to be displayed for career adaptability to be successfully demonstrated by an individual (Chapter 2, 2.3.3). The purpose of my research study was to explore participants' display of certain characteristics of career adaptability (Chapter 1, 1.2). The prominent characteristics of career adaptability are concern, control, curiosity and confidence, hence Savickas (2008) suggests the following. Concern indicates looking ahead to the future and preparing for what might come next (Chapter 4, Table 4.4, Theme 1). Control is when individuals are becoming responsible for shaping themselves and their environments to meet future demand (Chapter 4, Table 4.5, Theme 2). Curiosity is the exploration of possibilities and alternatives, thus approaching the future realistically (Chapter 4, Table 4.6, Theme 3). Confidence implies that choices can be actualised and implemented by an individual (Chapter 4, Table 4.7, Theme 4). The participants in my research displayed the above-mentioned characteristics (Chapter 4, Figure 4.2 & Figure 4.3). Therefore anxiety is reduced, employability is enhanced and the participants will most probably be able to cope well when change occurs (Chapter 2, 2.3.5). Findings from my research are in agreement with Savickas's (2008, Chapter 2, 2.3.3) proposition that career adaptability skills are important so that individuals may seek information, after which informed decisions are taken and different behaviours explored. Individuals then make a

commitment for a certain time period and manage the role being fulfilled at that time. Participants in my research demonstrated their orientation and preparation for the future by taking decisions after careful planning and exploration and seeking information as well as by maintaining confidence in their ability and choices (Chapter 4, 4.5.1, 4.5.2, 4.5.3, 4.5.4), and ultimately signifying the importance of career adaptability when negotiating changes.

- **To what extent are top academic achievers in Grade 12[3] able to cope with real-life situations after completing their final Grade 12 examination?**

Determining to what extent top academic achievers in Grade 12 were able to cope with real-life situations after completing their final Grade 12 examination proved difficult during my research study. The reason for this is that the research was done while participants were still in Grade 12 not at a later stage. Therefore studying participants over a period of time could contribute better to answering this sub question. Findings from my research suggest that participants can be seen as adaptive by their top academic achievement, due to their belief in their own cognitive ability and confidence in problem-solving skills for application to challenging tasks of changing circumstances (Chapter 4, 4.5.4). Furthermore, career adaptability is an important part of negotiating change, especially negotiating the change from high school to university (Chapter 4, 4.5.5.1). Therefore even though determining the extent to which top academic achievers in Grade 12 were able to cope with real-life situations after completing their final Grade 12 examination proved difficult in my research study, findings confirm there is a possibility that the participants in my research study will be able to cope due to their display of the characteristics of career adaptability.

5.2.2 Primary research question

- **What is the relationship between Grade 12 top academic achievement and certain characteristics of career adaptability?**

The findings from this research study suggest a significant relationship between Grade 12 top academic achievement and certain characteristics of career adaptability (Chapter

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[3] The research was conducted in one specific public school in Pretoria.

4, 4.5.1, 4.5.4). Findings from other research studies suggest that individuals concerned with accomplishments are able to apply their intellect to get something done when a change occurs. This suggests that accomplishments, as revealed by top academic achievement, contribute to being able to adapt when change occurs (Mumford et al., 1993). A further proposition is that an increase in educational level contributes to cognitive skills that increase an individual's ability to navigate change (O'Connell et al., 2008). Lastly it is stated by other researchers (Benso, Finegold & Mohrman, 2004 in Carless & Arnup, 2011) that knowledge and skills required when individuals enter a new career are more likely to be found in individuals with higher levels of education, thus facilitating a better transition. Additionally findings suggest that other variables such as participation in extracurricular activities (Chapter 4, 4.5.3), gender (Chapter 4, 4.5.5.2), race (Chapter 4, 4.5.5.1 & 4.5.5.4) and socio-economic circumstances (Chapter 4, 4.5.5.1 & 4.5.5.4) could not be excluded and therefore needs to be investigated further.

5.3. CONCLUSION OF THE STUDY

Findings from my research could be evidence that academic achievement is a contributing variable to career adaptability (Chapter 4, 4.5.4). My research study suggests that other variables should also be investigated, for example extracurricular activities (Chapter 4, 4.5.3), race (Chapter 4, 4.5.5.4), and socio-economic background (Chapter 4, 4.5.5.4). The findings of this research study furthermore suggest that career adaptability is one of the main contributions to successful adaptation to change (Chapter 4, 4.5.5.1 & 4.5.55.3). This however is not proved by the finding that career adaptability is the only contributing variable. What is nevertheless suggested is that facilitating characteristics of career adaptability by looking at the four dimensions of career adaptability (concern, control, curiosity, confidence) can contribute to the successful negotiation of change.

5.4. LIMITATIONS OF THE STUDY

Every study has its limitations. Consequently it is important to state the limitations upfront so that the reader of this research study is made aware of them (Nieuwenhuis, 2010c).

5.4.1 Selection of participants

Purposive sampling was used during this research study by choosing the participants based on top academic achievement in the high school where I was completing my internship. The limitation is that I as researcher should have critically identified the parameters of the population and then chosen the sample accordingly (Strydom & Delport, 2005). Before conducting the research I assumed that the two top academic achievers in the specific high school in Pretoria (that I chose) would be representative of the population of top academic achievers. After conducting the research I realised that various other variables as well as the unique context played a significant role in the findings of this research study. Therefore, clear identification and formulation of criteria for selection of participants to be representative of a population are of fundamental importance (Strydom & Delport, 2005). Furthermore, both participants were female. Therefore the possibility exists that the research could be gender-specific.

5.4.2 Generalisability

A major weakness of case study research is that the findings might not be generalisable to other situations (Leedy & Ormrod, 2005), and therefore the findings in this research study are context-bound. To be able to best generalise in a qualitative study representative cases of the chosen population should be selected (Creswell, 2007). Due to the choice of participants that might not have been representative of the larger population, generalisability is compromised. Therefore, a rich description of the contexts was provided, implying that the responsibility remains with the reader of this research study to determine the relatedness of findings to the reader's context (Mertens, 2010) as well as increasing transferability to similar settings (Seale, 1999 in Van Dullemen, 2009).

5.4.3 Researcher bias

The interpretation of data is influenced by researcher biases, subsequently subjective interpretation (Leedy & Ormrod, 2005). The possibility exists that if similar research was done by another researcher, variations in results could be found. Through my awareness of researcher bias, I however, tried to minimize the impact of this limitation.

5.5. CONTRIBUTION OF THE STUDY

The potential contribution of the findings of this study contributes to the following knowledge base. The results obtained by this research study could add to the scientific body of research in the field of career adaptability. This study made a small but hopefully significant contribution to understanding the benefit of career adaptability when a change occurs. My research has confirmed the importance of career adaptability for negotiating change (Chapter 4, 4.5.5) and determined that numerous variables could contribute to career adaptability. Some of which are academic achievement and participation in extracurricular activities (Chapter 4, 4.5.3; 4.5.5.1; 4.4.5.2; 4.5.5.4).

It is additionally suggested that there is a unique and shared variance between the four dimensions of career adaptability, where higher levels of concern, control, curiosity and confidence lead to higher career adaptability (Chapter 2, 2.3.4 & Chapter 4, 4.5.5.4). My research ties in with the suggested unique and shared variance as evident by varying degree of occurrence of the four dimensions that were identified among the two participants' responses on data sets (Chapter 4, 4.5.5.4). Thus, the variables contributing to the varying degree of occurrence could be investigated further. Furthermore it was found that inter-dependability is present between the four dimensions, therefore, indicating that the four dimensions do not follow a linear process, where one dimension precedes or follows another, but that dimensions occur simultaneously (Chapter 4, 4.3.3; 4.5.5.5).

Relevant literature indicated that the life line provides an opportunity for revealing and discussion of themes and patterns from which the life story was written (Chapter 1, 1.8.4). Findings from this research study showed that the life line might not have been optimally utilised as providing an opportunity for further discussion (Chapter 4, Table 4.8; Figure 4.1). In addition, the life story and interview provided the opportunity for clarification of written statements on the life line (Appendix E). Therefore it is confirmed that the life line may be used in combination with the life story and furthermore an individual interview for the discussion of detailed information.

In terms of practitioner contribution, my study places emphasis on the significance of career adaptability in the negotiation of change and transition (Chapter 2,

2.3; Chapter 4, 4.5.5.1). Working in the post-modern global economy requires more effort and confidence from individuals and they can expect to change jobs frequently (Savickas, 2007). Findings of my research study suggest that career adaptability skills can be facilitated (Chapter 4, 4.5.4). Consequently when individuals are in transition and seek career guidance, it could be worthwhile for the practitioner (psychologist) to facilitate and develop career adaptability skills together with the client, in order for the client to employ career adaptability skills and negotiate transition more successfully.

This study contributed to the practice in terms of the usefulness of the Career-Adapt-abilities-Inventory (Savickas, 2010a), life line, life story and an interview, for determining the presence of career adaptability in the client. Furthermore, indicating the value of using the career-adapt-abilities-inventory, life line and life story for further development of career adaptability skills.

5.6. RECOMMENDATIONS

5.6.1 Recommendations relating to research

- The sample that I used was not suitable to reach a conclusion in regard to the contribution of gender to career adaptability. Therefore, it might be valuable to do a comparative study between male and female adolescents and career adaptability.
- A comparative study between top academic achievers and non-achievers relating to career adaptability could be undertaken.
- Examining whether the career-adapt-abilities-inventory (Savickas, 2010a) can be used as an instrument to facilitate the characteristics of career adaptability.
- Investigating the variables contributing to the varying degree of the occurrence of the four dimensions of career adaptability (concern, control, curiosity, confidence).
- One of the alternatives that I had considered was related to the contribution of extracurricular activities to career adaptability, which may possibly be explored further.
- Socio-economic backgrounds as a contributing variable could be investigated.

- A suggestion for future research could be to choose participants after careful formulation of criteria, where top academic achievement is the main variable, limiting the contribution of other variables, for instance extracurricular activities as was evident in this research study (Chapter 4, 4.5.3). Subsequently establishing the presence of career adaptability before a transition takes place, and then once the transition has taken place, re-determining career adaptability and how well participants were able to cope with real-life situations.

5.6.2 Recommendations relating to practice

- An individual interview used in conjunction with the use of the Career-Adapt-Abilities-Inventory (Savickas, 2010a) and life line, could clarify information given by the client. Thus, enhancing identification of characteristics of career adaptability in terms of the four dimensions of career adaptability.

5.6.3 Recommendations relating to training

- Facilitation of the four dimensions of career adaptability for Grade 12 learners in order for the learners to negotiate changes more effectively when faced with leaving school.
- Facilitation of career adaptability for students entering higher education and training for the first time in order to cope better with the transition.
- The further expansion of the Educational Psychology students' training could be considered, regarding the facilitation of assessment and teaching of career adaptability skills.
- Practising psychologists might benefit from gaining an awareness of the value of career adaptability skills in real-life situations that contribute to the negotiation of change. Training regarding the benefits of career adaptability could prove to be potentially valuable for practising psychologists.

5.7. WHAT COULD I HAVE DONE DIFFERENTLY?

After having completed my studies, I wish to state that I could probably have made the following changes to my research strategy:

a. I could have chosen my participants in a different manner after careful consideration for selection criteria (as spelt out above).

b. The chapters on the in-depth literature review (Chapter 2) and research methodology (Chapter 3) could have been written before commencing with the collection of data.

c. I could have asked questions on the life line for further clarification and detailed information.

d. During the individual interview I asked the whole guiding question at once, I could have asked the question differently, separating the different parts of the question, in order for participants to be able to answer each part in more detail.

5.8. CONCLUDING COMMENTS

Given my own style of conducting research (which has developed over time), I wish to conclude by beginning with the following quote from (Leedy, 1997 in Adams, Collair, Oswald & Perold, 2004: 369): [*Research can be defined as*] *a process through which we attempt to achieve systematically and with the support of data the answer to a question, the resolution of a problem, or a greater understanding of a phenomenon*. My research presented me with the opportunity to address the research questions after systematically working from an in-depth literature review to analysing critically the data obtained gathered from participants and presenting my findings in order to obtain a greater understanding of the phenomenon career adaptability.

Learning about and doing research are of great value. More than merely achieving the outcomes of a program requirement, research methods and the application thereof are skills that will serve one for the rest of one's life (Leedy & Ormrod, 2005). The completion of my research study formed part of the outcomes of the Master's degree program in Educational Psychology at the University of Pretoria, but it was of far greater value to me personally. Referring to Chapter 1 the concept of adaptability first intrigued me while I was completing my own life line. I became aware of a pattern of negative experiences every time there was a transition in my life, with the exception of the transition from working life to full-time studying for my Master's degree. I realised that

systematic preparation based on reliable information had contributed to the transition being experienced in a more positive way.

After completing the in-depth literature review and analysing data in my research study I realised that the skills that I have learned will serve me for the rest of my life. Critically reflecting on information from literature, or reflecting on presenting findings from my research is a skill that I can now apply in my career and life. Furthermore, studying characteristics of career adaptability and confirming the importance of career adaptability when negotiating change, facilitated further development of characteristics of career adaptability within myself. As Savickas (2000, in Watson & Stead, 2002:155) puts it, *the only realistic adaptation is to live with change*. Career adaptability therefore seems to be an essential requirement in the world of work today.

It is not the strongest of the species that survives, nor the most intelligent that survives.
It is the one that is the most adaptable to change.

Charles Darwin

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APPENDIX A

Declaration of originality

UNIVERSITY OF PRETORIA

DECLARATION OF ORIGINALITY

**This document must be signed and submitted with every
essay, report, project, assignment, dissertation and/or thesis.**

Full names of student: MARICA HAVENGA

Student number: 28263202

Declaration

1. I understand what plagiarism is and am aware of the University's policy in this regard.

2. I declare that this *dissertation* (eg essay, report, project, assignment, dissertation, thesis, etc) is my own original work. Where other people's work has been used (either from a printed source, Internet or any other source), this has been properly acknowledged and referenced in accordance with departmental requirements.

3. I have not used work previously produced by another student or any other person to hand in as my own.

4. I have not allowed, and will not allow, anyone to copy my work with the intention of passing it off as his or her own work.

SIGNATURE OF STUDENT: *Havenga*

SIGNATURE OF SUPERVISOR: *[signature]*

APPENDIX B

Informed consent forms

REQUEST FOR INFORMED CONSENT

Dear Participant

You are invited to participate in a research study. The following information regarding the study is provided to help you decide if you would like to take part. Note that your participation is voluntary and that you may withdraw from the study at any time.

I am currently enrolled to complete a Master's degree in Educational Psychology at the University of Pretoria. The purpose of this study is to explore the relationship between top academic achievement and career adaptability in the course of life design counselling.

The following ethical principles apply:

- *Participation is voluntary.*
- *You are free to withdraw from the project at any stage if you wish to do so.*
- *All information provided by you will be treated confidentially and anonymously.*
- *Participants will not receive any monetary compensation.*
- *No participating party will be harmed or placed at risk of any kind.*
- *No reference will be made to any information that may convey any particular personal or identifiable information.*
- *You reserve the right to access any information that has been collected throughout the research process at any time.*
- *You reserve the right to withdraw any information or data that you wish not to be released for publication.*
- *The research findings might be published in an accredited research journal, but confidentiality and anonymity will be honoured.*

Expectations from you as participant during the research process:

- Completing the Career Adapt-Abilities Inventory.
    - Section A: Personal information
    - Section B: 55 statements for rating your strengths
    - Section C: Evaluation of the Career Adapt-Abilities Inventory
- Drawing up your lifeline, from birth to present, indicating certain milestones.
    - Using a blank sheet of paper (A3) draw a line lengthwise across the midpoint. Birth is indicated on the left hand side, whereas present is indicated on the right hand side. Recall and indicate milestones and experiences of importance or holding special meaning. Record these milestones chronologically. Each dot is labelled to identify the event. A dot higher on the sheet represents a positive experience, whereas a dot lower on the sheet represents a negative experience. All dots are thereafter connected to indicate the flow of the client's life (Cochran, 1997:74).
- Writing your life story
    - You will need to think of you life as an autobiography. Write it as an autobiography, with especially writing titles for the chapters. The titles should really reflect or sum up a particular period of your life. Title your life story as well (Cochran, 1997:74).
- Participating in an individual interview with the researcher.
    - A digital recorder will be used during the interview. Everything that has been recorded will be transcribed. All information will be kept confidential and presented anonymously.

Counselling services:

If the need arises for counselling services during the research process these services will be provided to you. The researcher will refer you to the necessary professionals.

By signing this letter of informed consent you are giving permission for the following sources of data to be released *(please indicate your agreement to each statement by ticking the block, e.g. ☑)*:

- ☐ Themes from the Career Adapt-Abilities Inventory.
- ☐ The verbatim transcription of the content recorded during the individual interview.
- ☐ The analysis, interpretation and reporting of the content discussed during the individual interview.
- ☐ Themes and other important information from the life line or life story.
- ☐ Notes and reflections made by the researcher throughout the research process.

If you have any questions before or during the study, or after its completion, you are welcome to contact me, Marica Havenga (084 096 2869).

Yours sincerely

_____

Marica Havenga
Researcher

Informed consent

Having read the attached request for informed consent, I declare that I am fully aware of the nature and purpose of the study conducted by Marica Havenga. I understand that all information will be treated anonymously and as strictly confidential. I further understand that all ethical considerations, as outlined in the request for consent, will be adhered to.

I hereby agree to: (a) participate in the completion of the Career Adapt-Abilities Inventory, (b) make myself available for the individual interview, and (c) complete my lifeline and life story as part of life design counselling. I also consent to the publication of the research findings, subject to anonymity and confidentiality.

Participant's name: …………………….....……………………………………………………

Signature: ……………………….....…………………………………………………..

Date: ……………………….....…………….……………………………………………

Signature of Parent/Guardian: …………….....………….......................................

REQUEST FOR INFORMED CONSENT

Dear Parent(s)

Your daughter is invited to participate in a research study. The following information regarding the study is provided to help you decide if you would like her to take part. Note that her participation is voluntary and that she may withdraw from the study at any time.

I am currently enrolled to complete a Master's degree in Educational Psychology at the University of Pretoria. The purpose of this study is to explore the relationship between top academic achievement and career adaptability in the course of life design counselling.

The following ethical principles apply:

- *Participation is voluntary.*
- *Your daughter is free to withdraw from the project at any stage if she wishes to do so.*
- *All information provided by your daughter will be treated confidentially and anonymously.*
- *Participants will not receive any monetary compensation.*
- *No participating party will be harmed or placed at risk of any kind.*
- *No reference will be made to any information that may convey any particular personal or identifiable information.*
- *You and your daughter reserve the right to access any information that has been collected throughout the research process at any time.*
- *You and your daughter reserve the right to withdraw any information or data that you wish not to be released for publication.*
- *The research findings might be published in an accredited research journal, but confidentiality and anonymity will be honoured.*

The following will be expected from your daughter as participant during the research process:

- Completing the Career Adapt-Abilities Inventory.
  - Section A: Personal information
  - Section B: 55 statements for rating your strengths
  - Section C: Evaluation of the Career Adapt-Abilities Inventory
- Drawing up her lifeline, from birth to present, indicating certain milestones.
  - Using a blank sheet of paper (A3) draw a line lengthwise across the midpoint. Birth is indicated on the left hand side, whereas present is indicated on the right hand side. Recall and indicate milestones and experiences of importance or holding special meaning. Record these milestones chronologically. Each dot is labelled to identify the event. A dot higher on the sheet represents a positive experience, whereas a dot lower on the sheet represents a negative experience. All dots are thereafter connected to indicate the flow of the client's life (Cochran, 1997:74).
- Writing her life story
  - She will need to think of her life as an autobiography. Write it as an autobiography, with especially writing titles for the chapters. The titles should really reflect or sum up a particular period of her life. She needs to title her life story as well (Cochran, 1997:74).
- Participating in an individual interview with the researcher.
  - A digital recorder will be used during the interview. Everything that has been recorded will be transcribed. All information will be kept confidential and presented anonymously.

Counselling services:

If the need arises for counselling services during the research process these services will be provided. The researcher will refer her to the necessary professionals.

By signing this letter of informed consent you are giving permission for the following sources of data to be released:

- Themes from the Career Adapt-Abilities Inventory.
- The verbatim transcription of the content recorded during the individual interview.
- The analysis, interpretation and reporting of the content discussed during the individual interview.
- Themes and other important information from the life line or life story.
- Notes and reflections made by the researcher throughout the research process.

If you have any questions before or during the study, or after its completion, you are welcome to contact me (084 096 2869).

Yours sincerely

_____
Marica Havenga
Researcher

Informed consent

Having read the attached request for informed consent, I declare that I am fully aware of the nature and purpose of the study conducted by Marica Havenga. I understand that all information will be treated anonymously and as strictly confidential. I further understand that all ethical considerations, as outlined in the request for consent, will be adhered to.

I hereby agree to allow my daughter to: (a) participate in the completion of the Career Adapt-Abilities Inventory, (b) make herself available for the individual interview, and (c) complete her lifeline and life story as part of life design counselling. I also consent to the publication of the research findings, subject to anonymity and confidentiality.

Participant's name: …………………………………………………………………………

Parent(s) name: ………………………………………………………………………….

Signature(s): …………………………………………………………………………..

Date: …………………………………………………………………………………

Attention: The Headmaster

RE: CONSENT FOR MASTER'S DEGREE RESEARCH AT HIGH SCHOOL

I am currently enrolled for my Master's degree in Educational Psychology at the University of Pretoria. The purpose of this study is to explore the relationship between top academic achievement and career adaptability in the course of life design counselling.

For the purpose of my study, I will require two learners who are top academic achievers in Grade 12. The learners will be asked to complete a Career Adapt-Abilities Inventory. Furthermore, an individual interview will be done with each participant and a life line and life story has to be completed.

Participation in the study will be voluntary and the learners will be informed that they are allowed to withdraw from the research at any time. Informed consent will be obtained from both the learners and their parents. The learners' identities will be protected, their privacy respected and all the information will be managed confidentially. The school's name will also not be mentioned in the above study, unless otherwise requested.

Your favourable consideration of my request for permission to conduct my research at ... High School will be appreciated.

Yours sincerely

_____

Marica Havenga

Researcher

…………………………………………………………………………………....

DECLARATION

Herewith I, the undersigned, grant Marica Havenga permission to conduct her research study (as discussed and stipulated in the letter) at ... High School.
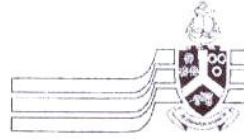

....

Headmaster   **Date**

APPENDIX C

Ethical clearance certificate

UNIVERSITY OF PRETORIA

FACULTY OF EDUCATION

RESEARCH ETHICS COMMITTEE

CLEARANCE CERTIFICATE	**CLEARANCE NUMBER :** EP 10/06/03
DEGREE AND PROJECT	MEd
	The relationship between career adaptability and academic achievement in the course of life design counselling
INVESTIGATOR(S)	Marica Havenga
DEPARTMENT	Educational Psychology
DATE CONSIDERED	16 August 2011
DECISION OF THE COMMITTEE	APPROVED

Please note:

For Masters applications, ethical clearance is valid for 2 years
For PhD applications, ethical clearnace is valid for 3 years.

CHAIRPERSON OF ETHICS COMMITTEE	Prof L Ebersohn
DATE	16 August 2011
CC	Jeannie Beukes
	Prof J.G. Maree

This ethical clearance certificate is issued subject to the following conditions:

1. A signed personal declaration of responsibility
2. If the research question changes significantly so as to alter the nature of the study, a new application for ethical clearance must be submitted
3. It remains the students' responsibility to ensure that all the necessary forms for informed consent are kept for future queries.

Please quote the clearance number in all enquiries.

APPENDIX D

Department of Education:

Request to conduct research

UMnyango WezeMfundo **Department of Education**	**Lefapha la Thuto** **Departement van Onderwys**

Enquiries: Nomvula Ubisi (011)3550488

Date:	**01 June 2010**
Name of Researcher:	**Havenga Marica**
Address of Researcher:	**503 Henrietta Street**
	Dorandia
	0182
Telephone Number:	**0125465311/0840962869**
Fax Number:	**N/A**
Research Topic:	**Exploring the Relationship Between Career Adaptability and Academic Achievement in the Course of Life Design Counselling**
Number and type of schools:	**1 Secondary Schools**
District/s/HO	**Tshwane West**

Re: Approval in Respect of Request to Conduct Research

This letter serves to indicate that approval is hereby granted to the above-mentioned researcher to proceed with research in respect of the study indicated above. The onus rests with the researcher to negotiate appropriate and relevant time schedules with the school/s and/or offices involved to conduct the research. A separate copy of this letter must be presented to both the School (both Principal and SGB) and the District/Head Office Senior Manager confirming that permission has been granted for the research to be conducted.

Permission has been granted to proceed with the above study subject to the conditions listed below being met, and may be withdrawn should any of these conditions be flouted:

1.   *The District/Head Office Senior Manager/s concerned must be presented with a copy of this letter that would indicate that the said researcher/s has/have been granted permission from the Gauteng Department of Education to conduct the research study.*
2.   *The District/Head Office Senior Manager/s must be approached separately, and in writing, for permission to involve District/Head Office Officials in the project.*
3.   *A copy of this letter must be forwarded to the school principal and the chairperson of the School Governing Body (SGB) that would indicate that the researcher/s have been granted permission from the Gauteng Department of Education to conduct the research study.*

4. *A letter / document that outlines the purpose of the research and the anticipated outcomes of such research must be made available to the principals, SGBs and District/Head Office Senior Managers of the schools and districts/offices concerned, respectively.*

5. *The Researcher will make every effort obtain the goodwill and co-operation of all the GDE officials, principals, and chairpersons of the SGBs, teachers and learners involved. Persons who offer their co-operation will not receive additional remuneration from the Department while those that opt not to participate will not be penalised in any way.*

6. *Research may only be conducted after school hours so that the normal school programme is not interrupted. The Principal (if at a school) and/or Director (if at a district/head office) must be consulted about an appropriate time when the researcher/s may carry out their research at the sites that they manage.*

7. *Research may only commence from the second week of February and must be concluded before the beginning of the last quarter of the academic year.*

8. *Items 6 and 7 will not apply to any research effort being undertaken on behalf of the GDE. Such research will have been commissioned and be paid for by the Gauteng Department of Education.*

9. *It is the researcher's responsibility to obtain written parental consent of all learners that are expected to participate in the study.*

10. *The researcher is responsible for supplying and utilising his/her own research resources, such as stationery, photocopies, transport, faxes and telephones and should not depend on the goodwill of the institutions and/or the offices visited for supplying such resources.*

11. *The names of the GDE officials, schools, principals, parents, teachers and learners that participate in the study may not appear in the research report without the written consent of each of these individuals and/or organisations.*

12. *On completion of the study the researcher must supply the Director: Knowledge Management & Research with one Hard Cover bound and one Ring bound copy of the final, approved research report. The researcher would also provide the said manager with an electronic copy of the research abstract/summary and/or annotation.*

13. *The researcher may be expected to provide short presentations on the purpose, findings and recommendations of his/her research to both GDE officials and the schools concerned.*

14. *Should the researcher have been involved with research at a school and/or a district/head office level, the Director concerned must also be supplied with a brief summary of the purpose, findings and recommendations of the research study.*

The Gauteng Department of Education wishes you well in this important undertaking and looks forward to examining the findings of your research study.

Kind regards

p.p. Martha Mashego
ACTING DIRECTOR: KNOWLEDGE MANAGEMENT & RESEARCH

2010-06-03

The contents of this letter has been read and understood by the researcher.	
Signature of Researcher:	*Mdusoga*
Date:	1/7/2010

APPENDIX E

Data analysis process