

# USING A NARRATIVE APPROACH TO DEVELOP THE SENSE OF SELF OF A YOUNG ENGINEER

by

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To the great 'I AM' for Your creation and unconditional love I receive daily.

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*"Integrity, honesty, responsibility, compassion, loves — all flows easily from the person whose self-esteem is high. He feels that he matters, that the world is a better place because he is here. He has faith in his own competence. He is able to ask others for help, but he believes that he can make his own decisions and is his own best resource. Appreciating his own worth, he is ready to see and respect the worth of others. He radiates trust and hope."*

*Virginia Satir*

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## ABSTRACT/SUMMARY

# USING A NARRATIVE APPROACH TO DEVELOP THE SENSE OF SELF OF A YOUNG ENGINEER

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There is an increasing demand for engineering talent from a growing and developing global population. Engineers are in demand because they have instigated technological developments that have contributed to the creation of our modern society. Talented engineers are needed to devise solutions for modern day technological challenges such as new sustainable energy resources, more efficient use of materials and the recovery of materials from waste. These professionals play a pivotal role in developing countries in particular.

While there is a growing need for multi-talented engineers, the number of young engineers entering the market is decreasing. Moreover, many engineers are leaving the profession. Factors contributing to engineers leaving the technical environment include lack of adaptability skills, lack of continuing professional development opportunities, insufficient career paths, under-utilisation of engineers and under-qualified engineering staff (Du Toit & Roodt, 2009).

Engineering graduates are generally well prepared with regards to engineering theory and fundamentals. However, due to the demands of engineering curricula, engineering students do not have much time to consider other factors that could influence their future lives and career direction (Millar, 2011). Engineering students often have an underdeveloped sense of personal knowledge and insight to enable them to commit to live certain decisions. According to Millar (2011) a career of purpose, fulfilment and financial success in engineering is gained by (1) knowing oneself and the fact that one is in charge of one's life and future, (2) being aware that soft skills (communication skills, leadership skills, capacity to work in teams and to plan ahead) are needed to support technical skills, and (3) that every person is a salesman of him/herself and his or her product.

The purpose of my study is to develop the sense of self of a young engineer to enable him to manage his future career path effectively and meaningfully. Research questions that will be explored are the essential aspects of a narrative approach, including what the sense of self of a young engineer entails and the possible influence of a narrative approach on the sense of self of a young engineer.

A case study design is utilised. The focus will be on narrative techniques to develop the sense of self of a young engineering graduate in a new working environment.

A multiple method approach will be implemented to collect and analyse data. Priority will be given to qualitative approaches (in other words, a QUALITATIVE-quantitative approach will be used). The following standardised questionnaires will be utilised: *Myers-Briggs Type Inventory (MBTI)* (Briggs and Briggs Myers, 1994), *Self-Directed Search (SDS)* (Gevers, Du Toit & Harilall, 1995), *Emotional Quotient Inventory (EQ-i)* (Bar-On, 2004), as well as the *Career Adapt-Adaptabilities Inventory (CAAS)* (Savickas & Porfeli, 2012). Qualitative methods that will be used are: Career-genogram, *Collage*, *Career Interest Profile (CIP)* (Maree, 2010), *Life Chapters* (Cochran, 1997), *Career Construction Interview (CCI)* (Hartung, 2011), informal interviews and reflective feedback notes. Inductive data analysis will be used to analyse and interpret the data.

I hope to make recommendations that will enhance the sense of self of an engineering student who seeks the advice of a career counsellor. Ultimately, my aim is to contribute meaningfully to this client's decision-making career, self-construction and life designing.

## LIST OF KEY WORDS

Narrative approach

Sense of self

Engineer

Case study

Employability

Professional development

Career development

## CHAPTER 1

### INTRODUCTORY ORIENTATION

#### 1.1 ORIENTATION

In his commencement address at the University of Stanford on 12 June 2005, Steve Jobs made the following statement which I consider as the heartbeat of this study.

Your time is limited, so don't waste it living someone else's life ... Don't let the noise of others' opinions drown your own inner voice. And most important, have the courage to follow your heart and intuition ...

#### 1.2 INTRODUCTION

The introduction to a research project should convince the readers of its purpose, provide sufficient background to the enquiry and ought to influence readers to the significance of the study (Athanasou, Mpofu, Gitchel & Elias, 2012). To this end, this research study is introduced by the aim to contextualise and explain the relevance for the endeavour to develop the sense of self of a young engineer. The world of work in the twenty first century, professional training of engineers and the contribution of engineers in the world of work are used as themes to contextualise the enquiry of a young engineer exploring his future career path. The significance of this study will hopefully be found in the meaning it brings over the lifespan of an engineer who wanted to develop and explore his sense of self in the early years of his profession.

#### 1.3 THE WORLD OF WORK

The world of work in the 21st century is differs vastly from the previous century. Changes such as globalisation, technological change and altered demographic trends (Bimrose, 2010) influenced the labour market to the extent that it makes people feel apprehensive and often insecure (Savickas, 2011). Individuals need to proactively navigate their own careers in a world of work where employers function increasingly by employing skilled people for specific projects rather than offering permanent jobs for a lifetime (Savickas, 2011).

The global labour market emerged to be highly competitive and unpredictable. The lack of job security also motivates individuals to take responsibility for their own career building and planning processes which were previously undertaken by employing companies. The phenomenon of 'jobless work' (Savickas, 2011) requires of individuals to cope with many job changes over their lifetime, but in this process they need to keep their 'social identity and sense of self' (Savickas, 2011).

These trends have direct implications for career counsellors when engaging with clients. Counsellors need to assist clients to link their lives to the complex and competitive economic context they are in (Savickas, 2011). Career counsellors also need to instigate new attitudes (Maree, 2010b) of flexibility and adaptability in clients to live in a world of continuous change and adjustment in order to stay relevant through life-long learning. Clients also need to develop a strong sense of self by being cognisant of the skills they can ‘sell’ to industry to be the best candidates for new projects and to be skilled as top future employees (Pretorius & Morgan, 2010). The career counselling process needs to shift from individual differences to individuals themselves (Savickas, 2011).

Maree (2010b) draws attention to the growing gap between what people are trained/educated for and what they really need to successfully execute a job in industry. Maree (2010b) urges counsellors to encourage clients to become ‘critical thinkers, creative problem solvers and skilled decision makers’ instead of being trained linearly for one profession or job. Savickas suggests that career counsellors develop the ‘grounded self’ in clients by focusing on employability, adaptability, emotional intelligence and lifelong learning (Savickas, 2011). Savickas calls these constructs the client’s currency to capitalise on his identity. Employability, adaptability, emotional intelligence and life-long learning are the goals to strive for to be able to survive the 21st century workplace (Savickas, 2011).

#### **1.4 PROFESSIONAL DEVELOPMENT OF ENGINEERING STUDENTS**

An engineering degree in the 21<sup>st</sup> century is seen as an educational foundation for many functions and professions and is not limited to traditional engineering work (Millar, 2011). Engineering graduates are generally well prepared with engineering theory and fundamentals. Due to the demands of engineering curricula, engineering students do not have much time to consider other factors that would influence their future lives and career direction (Millar, 2011). I have seen senior and final year students in my office asking for support to be able to launch their careers in industry whether it will be in consultancy, starting to work for the company who sponsored their studies or apply for a job in another country. Engineering students often have an underdeveloped sense of personal knowledge and insight to enable them to commit to certain life decisions. According to Millar (2011) a career of purpose, fulfilment and financial success in engineering is gained by (1) knowing yourself and the fact that you are in charge of your life and future, (2) being aware that soft skills (communications, leadership, team work, planning) are needed to support technical skills, and (3) that every person is a salesman of himself and his product.

## 1.5 CONTRIBUTION OF ENGINEERS TO THE WORLD OF WORK

There is an increasing demand for engineering talent from a growing and developing global population. Engineers are in demand because they have instigated technological developments that have contributed to the creation of our modern society by building infrastructure, crafting industrial production and constructing modern transportation systems, and mechanised agriculture. In addition, engineers created and established technological innovations such as mass media, computers and communication systems. These technological developments are still continuing at a fast pace globally.

Engineers play a pivotal role in developing countries. Prosperity and economic development are not equally distributed across the world. The contexts of developing countries such as South Africa, require creativity to address challenges linked to overpopulation that makes demands on energy, food, land, water, transportation, materials, waste disposal, earth moving, health care, telecommunications and infrastructure. Ninety five per cent of the expected population growth will take place in developing and under-developing countries. Talented engineers are needed to create solutions to achieve greater efficiency in production processes and transportation systems, new sustainable energy resources, more efficient use of materials and the recovery of materials from waste.

While there is a growing need for multi-talented engineers, qualified engineers are often lost to the engineering industry for a number of reasons. These include a lack of adaptability skills to different environments, insufficient incentives, appointment policies, a lack of opportunities to gain the required experience, a lack of continuing professional development opportunities, insufficient career paths, under-utilisation of engineers due to low numbers of technicians and artisans available in some environments, and under-qualified engineering staff such as at local government level (Du Toit & Roodt, 2009).

The above provides some background to the engineering industry, professional development of engineers and the current world of work. It also underscores the importance of career counselling and support to young individuals in an engineering environment. With many engineers leaving the industry in South Africa, it is worth exploring possible means to retain and support them to prosper in their careers to be able to serve South African and global industry demands.

## **1.6 RATIONALE**

The rationale of a research project has two components (Maree & Van der Westhuizen, 2009, Vithal & Jansen, 2004). Firstly, it serves to indicate how the researcher developed an interest in the topic and secondly, it explains why the researcher finds the project worth doing.

### **1.6.1 Personal interest**

I am currently working as an educational counsellor in the Department of Mining Engineering at the University of Pretoria. Students seek outside advice relating to their academic life and performance, future careers, personal hardships, family matters, relationships and resources for a variety of reasons. The Department of Mining Engineering realised the importance of professional/non-technical skills apart from technical and content knowledge for students before they enter the industry. For the last three years I have been involved in an initiative with a retired mining engineer and legendary teacher to advocate the need for self-knowledge and development as essential aspects to professional and holistic development of engineering graduates. The BEng degree in Mining is technically challenging and consumes almost all the time of students. We use the limited available time to cooperatively teach students communication skills (written and verbal) and to expose them to work in teams (project-based) which are skills they will need on a daily basis once they are in industry. A leading petrochemical industry partner heard about this initiative and asked the Department of Mining Engineering to roll out a similar programme to their final year bursary holders from other engineering disciplines at the University of Pretoria. While being involved in this programme, a chemical engineer who finished his studies at TUKS the previous year asked if I could assist him with decisions regarding his future career path.

My personal interest is to assist and enable this young engineer to discover what he perceives to be meaningful and purposeful as these perceptions are closely linked to the sense of self. People often had little or no exposure to career counselling although they were exposed to vocational guidance and career education at school. I want to be useful to him in facilitating a process to equip him to make meaningful career decisions for his future.

### **1.6.2 Why I believe the topic is worth pursuing**

The exploration and development of the sense of self of a young engineer will hopefully have a meaningful influence on his future career. By exploring the sense of self of a young engineer, he

- will hopefully get to know himself better to steer his career purposefully
- will hopefully become more adaptable to manage future decisions

- will hopefully become more aware of how to be more employable in future
- will hopefully become more aware of the role of emotional intelligence in his career and relationships
- should be able to use the knowledge and experience gained from this intervention to adapt to change in future.

From a researcher's perspective, I will hopefully be better informed on the current world of work from the perspective of an engineering graduate. This knowledge and experience can be used to prepare undergraduate students better for what awaits them once they launch their careers.

## **1.7 PURPOSE**

The purpose of this study is to develop the sense of self of a young engineer to enable him to manage his future career path effectively and meaningfully.

## **1.8 RESEARCH QUESTIONS**

### **1.8.1 Primary research question**

The primary research question which will be explored in this study is:  
How can a narrative approach be utilised to develop the sense of self of a young engineer?

### **1.8.2 Secondary research questions**

To be able to understand the main question, the following secondary research questions will be explored in the study:

- What are the essential aspects of a narrative approach to career counselling?
- What does the sense of self of a young engineer entail?
- What is the influence of a narrative approach to career counselling intervention on the sense of self of a young engineer?

## **1.9 CLARIFICATION OF CONCEPTS**

### **1.9.1 Narrative approach**

A narrative is the most natural way for human beings to express the inherent structure of their personal experience (Barresi & Juckes, 1997). A narrative is about storytelling. In this study a narrative approach is used as part of the umbrella term (Maree & Malepo, 2007) 'postmodern career facilitation'. It refers to a storied-approach as a means to recall the past back to life and of interpreting present as well as future experiences appropriately (Cochran, 2007). Stories also compose one's view of oneself (Maree, 2010). Savickas (2011) uses the narrative approach to co-



construct life portraits or new identities with clients to view themselves differently and help them understand how they are living their lives.

### **1.9.2 Sense of self**

.... [sense of] *self is an emergent awareness that is culturally shaped, socially constituted, and narrated by language* (Mark Savickas).

Sense of self in this study refers to self-concept, self-regard or self-perception. Person-centred theory as coined by Rogers, distinguishes between self and self-concept. Self is viewed as the real, underlying or ‘organismic’ self (Nelson-Jones, 2011). Self-concept is the perceptions of the self or the values attached to these perceptions which do not always correspond with the organismic/experiencing self. Self-concept is seen as the constellation of certain perceptions about the self. In the context of narrative counselling Savickas (2011) remarks that the more clients view their ‘me’, the more they develop their self-concepts.

### **1.9.3 Young engineer**

“Young engineer” refers to a person with a degree in engineering with limited experience in the job market.

### **1.9.4 Adaptability**

Savickas (1997) refers to adaptability as ‘the quality of being able to change, without great difficulty, to fit new or changed circumstances’ (p. 194). 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, p. 257). Individuals are considered adaptable when they act in an appropriate manner in a specific situation (Maree, 2010).

### **1.9.5 Employability**

Bridgstock (2009) refers to the following definition in the Kirby Report (Department of Education, Employment and Training in Australia, 2000) based on work done by the International Labour Organisation (2000) as a holistic view on employability.

[Employability involves] self-belief and an ability to secure and retain employment. It also means being able to improve ... [the worker’s] productivity and income-earning prospects. This often requires competing effectively in the job market and being able to move between occupations as necessary. It requires ‘learning to learn’ for new job opportunities (p. 37).

### **1.9.6 Emotional intelligence**

Bar-On's definition of emotional intelligence (EI) refers to the emotional, personal, social and survival dimensions of intelligence essential for functioning adequately on a daily basis (Maree & Bester, 2006). Bar-On also stated that people who are emotionally and socially intelligent are able to understand and express themselves, they understand and relate well to others, and successfully cope with the demands of daily life (Bar-On, 2006).

### **1.9.7 Lifelong learning**

The value of lifelong learning is an ability to keep up with change in order to stay relevant and marketable (Maree, 2009). Maree (2009) asserts that a clear understanding of their skills, values and potential together with continuous learning will enable clients to apply what they possess to challenge difficulties on their career path.

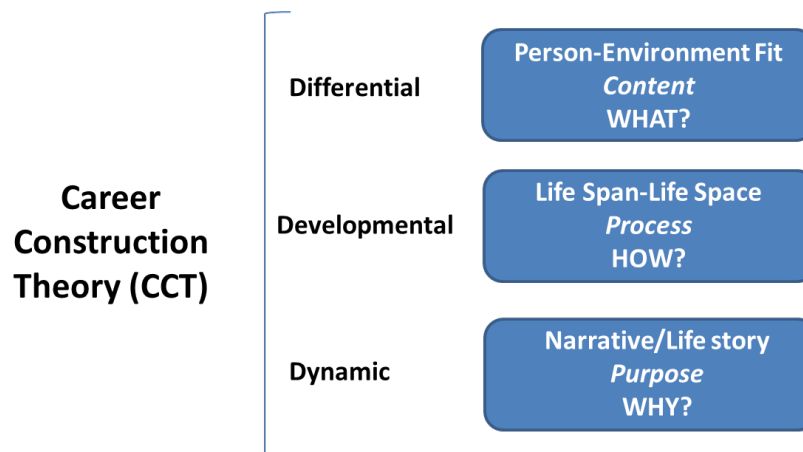
## **1.10 THEORETICAL/CONCEPTUAL FRAMEWORK**

According to Maree and Van der Westhuizen (2009), a theoretical framework locates a research project to indicate the origin of the inquiry. Krumboltz in Niles and Harris-Bowlsbey (2009) compares theory to a road map. According to him theory is a way of oversimplifying a complex situation to make it easier for us to see the big picture. The career construction theory (CCT) developed by Mark Savickas (2005) provides a clear road map and theoretical foundation for this study.

### **1.10.1 Theoretical framework**

Career Construction Theory (CCT) 'provides a way of thinking about how individuals select work and adjust to work' (Savickas, 2005). It underlines the concept that individuals create careers by deriving meaning from personal career experiences. Investigating their responses and actions to these experiences bring understanding and insight—it is a subjective route.

Career Construction Theory considers three perspectives of vocational behaviour (see **Figure 1.1**). Savickas derived the tripartite framework of organising personality theories as a foundation from McAdams (1995). Career Construction Theory as the overarching comprehensive theory has three classic theoretical segments or perspectives.



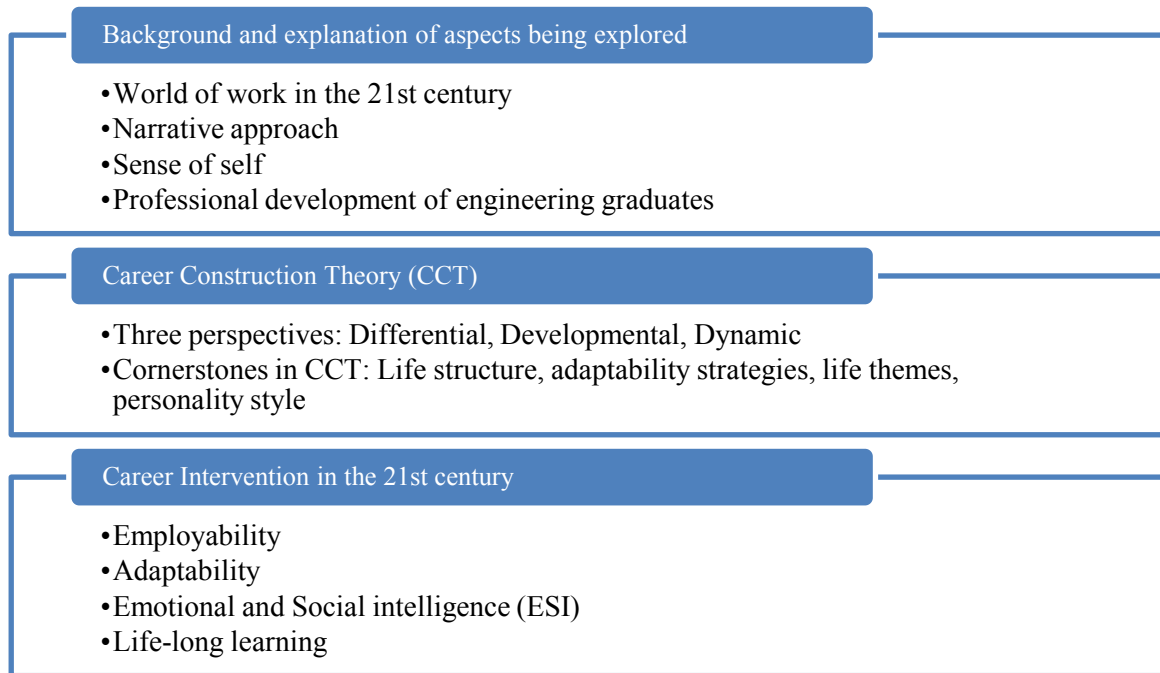
**Figure 1.1:** A diagram of the Career Construction Theory, compiled as described by Hartung in Maree (2011) and Savickas (2005).

The differential and developmental perspectives remain useful to match workers to work and to develop careers based on the readiness of an individual for a position within an organisation (Savickas, 2005) but there are questions and dilemmas created by the global economy that impose new challenges upon careers. These challenges call for less objectivity and for greater focus on the subjective careers of individuals.

The dynamic perspective adds a narrative, psychodynamic approach to career counselling where patterns, themes and meaning are inherent and elicited from the individual's emerging life stories and experiences. There is also focus on the spirit and values that guide the choices and adjustments that build a career (Savickas, 2005). This subjective approach is linked to the sense of self of individuals. Maree (2012) therefore indicates the value of blended theoretical dimensions which create an overarching and user-friendly approach (Maree, 2010) to career counselling to stay useful to clients.

### 1.10.2 Conceptual Framework

A conceptual framework provides links among the key concepts of a research project (Vithal and Jansen, 2004). It serves as an explanatory framework and lens to help the researcher understand and explain the specific aspect of reality under investigation (Maree & Van der Westhuizen, 2009). The following framework will guide this research project.



**Figure 1.2:** Proposed conceptual framework.

## 1.11 PARADIGMS

According to Nieuwenhuis (2010) a paradigm is ‘a set of assumptions or beliefs about aspects of reality which gives rise to a particular world-view’. Nieuwenhuis (2010) also indicates that a paradigm serves as an organising principle by which reality is interpreted.

### 1.11.1 Ontology (What is the truth?)

The ontological assumptions applicable to this research study are postmodern, narrative and qualitative, bearing in mind that these terms are often used interchangeably (Maree, Ebersöhn & Biagione-Cerone, 2010).

### 1.11.2 Epistemological assumptions (How can we get to know the truth?)

#### 1.11.2.1 Interpretivist /constructivist

In this study I will work from an interpretivist and social constructivist paradigm. Career Construction Theory (CCT) emphasises interpretive and interpersonal processes which involve the understanding and interpreting of meanings revealed during interactions (Maree and Hansen, 2011).

## **1.12 RESEARCH DESIGN**

Nieuwenhuis (2010) defines a research design as a plan and strategy moving from the underlying philosophical assumptions to specify the selection of respondents, the data gathering techniques to be used and the data analysis to be done. This study is interpretive and explorative in nature and the research design for the enquiry is a case study.

### **1.12.1 Multi-method approach**

I will use a multi-method research design for this study. A multi-method or mixed method research design is a procedure for collecting and analysing both quantitative and qualitative research methods in a single study to explore a research problem (Creswell, 2008).

## **1.13 SAMPLING**

Purposive sampling (Nieuwenhuis, 2010) will be used to select a participant. This kind of sampling is done with a specific purpose in mind, namely to provide a better understanding of the central phenomenon (Creswell, 2008) of the study. An engineer in industry had to fulfil certain criteria in order to benefit from this study. The specific criteria which will be used are discussed in Chapter 3.

## **1.14 DATA COLLECTION**

In the data gathering, priority will be given to qualitative data emphasising the exploration and development of the sense of self of the participant, but will also include quantitative data (Qual + quan) to support the process and findings.

The psychometric instruments that will be used in the study are described in detail in Chapter 3. I plan to cover the three levels/perspectives of the Career Construction Theory (CCT) (Savickas, 2005) which is the theoretical foundation of the study.

## **1.15 DATA ANALYSIS AND INTERPRETATION**

This study is interpretive in nature meaning that the data contains multiple realities (Maree & Van der Westhuizen, 2009) to explore. For this study a triangulated analysis design was chosen to analyse the data. The triangulated analysis design (Creswell, 2008; Ivankova, Creswell, & Plano Clark, 2007) is best suited when ‘both types of data is collected simultaneously about the same phenomenon in order to compare and contrast the different findings to produce validated conclusions’ (Ivankova et al., 2007, p. 266).

### **1.15.1 Qualitative data analysis**

Inductive data analysis will be used to analyse and interpret the qualitative data. Inductive analysis helps to identify and disclose various realities which are potentially present (Maree & Van der Westhuizen, 2009) in interpretive research such as this case study.

### **1.15.2 Quantitative data analysis**

The quantitative data analysis will be conducted according to the prescribed standardised approaches of the questionnaires respectively. The different constructs and specific results of the participant's generated profiles/reports will be used to identify, define and describe themes related to the sense of self of the participant. These categories and themes will be compared to the categories and themes derived from the narrative data to explore possible correlations (Maree & Van der Westhuizen, 2009).

## **1.16 QUALITY ASSURANCE**

To enhance and increase the trustworthiness (Maree & Van der Westhuizen, 2009) of the research project the strategies that will be adhered to and strived for are credibility, dependability, conformability and transferability (Creswell, 2003; McMillan & Schumacher, 1997). These strategies are described in more detail in Chapter 3.

## **1.17 ETHICAL CONSIDERATIONS**

The essential purpose of research ethics is the protection of the welfare of research participants but it also extends to quality assurance (the *how*) in research (Wassenaar, 2006). I agree to and endorse the eight ethical guidelines by Emanuel, Wendler, Killen & Grady (2004) which are collaborative partnership, social value, scientific validity, selection of participants, the risk/benefit ratio, ethical review, informed consent, and on-going respect for participants and study communities when conducting this study. These guidelines are discussed in Chapter 3. During the entire process I will attempt to follow the ethical guidelines by trying to serve the best interest of the participant at all times.

## **1.18 OUTLINE OF CHAPTERS**

- Chapter 1:** Introductory orientation
- Chapter 2:** Theoretical and conceptual framework
- Chapter 3:** Research process
- Chapter 4:** Research results
- Chapter 5:** Summary and recommendations

## CHAPTER 2

### THEORETICAL AND CONCEPTUAL FRAMEWORK

#### 2.1 INTRODUCTION

I would like to describe the aim of this chapter by means of a metaphor. A narrative approach which has the objective in this study to developing the sense of self can be compared to the discovery of constellations in astronomy. According to the Oxford English Dictionary (2007), a constellation is ‘a group of stars forming a recognised pattern’. Constellations are not real but by connecting the stars, farmers, poets and astronomers more than 6000 years ago invented patterns to tell the stars apart. These patterns are known as the 88 constellations we know today. The constellations were invented to effortlessly find and name the different stars. By using these star patterns or constellations, the sky is divided into manageable and recognisable fields to guide orientation and navigation. Certain stars are brighter or darker during the different seasons. Farmers used to utilise the appearance of particular stars seasonally as indicators when to plant or harvest crops (Dolan, n. d.).

A narrative approach involves the stories we tell. A narrative contains themes and identifiable patterns (constellations) in our lives to inform and steer us toward the future. These patterns are also seasonal. Patterns change as people adopt different societal roles and as they go through life’s stages and traumas. Hartung (2007) uses the word *constellation* when he refers to the different roles people play in cultural spheres (constellation of roles). Nelson-Jones (2011) uses the word ‘constellation’ to refer to the different perspectives about the self which shape our self-concept. As we experience life our sense of self is shaped by the roles we play, the transitions we make, our values, abilities, needs and interests which are informed by the personal meaning attached to our decisions and circumstances.

Another way to describe this process is ‘connecting the dots’. This implies an ability to understand the relationship between different ideas or experiences. The sense of self is developed by exploring what Hartung (2011) names as the four cornerstones of career construction. These comprise the life structure of a client, career adaptability strategies, life theme stories and personality style. Each client is unique and has different roles in society, different adaptation skills and strategies, different motivations that are drivers throughout their lives and a unique personality mix which informs and navigates their personal life and career.

The aim of this chapter is to try and explore this framework to hopefully develop the sense of self of a young engineer. As the themes become clearer like the stars in the constellations, a

pattern will emerge to finally connect the dots in order to form a clear self-portrait of a young engineer to inform his future career. I begin this chapter by discussing the conceptual framework which will guide the literature review. The framework entails a background and explanation of the main constructs explored. I then discuss Career Construction Theory (CCT) which forms the theoretical backbone to this enquiry. Lastly I discuss career intervention from the career construction or life design perspective aiming to develop the sense of self of a young engineer.

## **2.2 CONCEPTUAL FRAMEWORK<sup>1</sup>**

The primary research question is how a narrative approach can be applied to develop the sense of self of a young engineer. The main concepts in the primary research question namely ‘narrative approach’, ‘sense of self’ and the ‘professional development of engineers’ will be explored against the background of the world of work in the 21<sup>st</sup> century. By exploring these phenomena the secondary questions on what a narrative approach entails will be addressed. The differential, developmental and dynamic perspectives and four main cornerstones of Career Construction Theory applied as the leading theory for this project, will be explored and will shed some light on what the sense of self of a young engineer encompasses. Career intervention in the 21<sup>st</sup> century will be explored finally, by addressing the main goals of career counselling (Savickas, 2011), namely employability, adaptability, emotional and social intelligence (ESI) and life-long learning. The final question on the influence of a narrative approach on the sense of self on a young engineer will be addressed by tracing the change that occurred as a result of the exploration process.

## **2.3 WORLD OF WORK IN THE 21ST CENTURY**

The world of work in the 21<sup>st</sup> century is vastly different from what it was in the past century. Three main trends which resulted in enormous changes in the labour market are globalisation, technological change and demographic trends (Bimrose, 2010). These three terms will now be discussed.

The term ‘globalisation’ is widely used across industries and disciplines. A definition of globalisation which is not linked to a specific industry is ‘the process by which a company or organisation expands to operate internationally’ (Collins, 2011). The result of internationalisation (globalisation) is that jobs, people and capital become mobile and not bound to national borders leaving a single global market for trading.

Technological change is the second main trend which significantly influenced the labour market (Bimrose, 2010). The fast development in information and communication technology

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<sup>1</sup> See Figure 1.2, Proposed conceptual framework, p. 9.



created enormous changes in business practices. Mobile technologies enable people to work from different locations across the globe. Technology also enables sub-contractors and suppliers from all over the world to compete with the local market for products and services, because it becomes easier to do business over a long distance. Technological change largely resulted in the lifting of barriers of time and distance.

The third main trend that forced changes on the labour market is the demographics of populations (Bimrose, 2010). Many countries have ageing populations due to increased life expectancy and declining birth rates (Bimrose, 2010). In many countries the number of people retiring is higher than the number entering the labour market. .Transfer of necessary skills often does not happen in such cases.

The above trends have implications for employees. Individuals now can have a series of jobs (McMahon and Tatham, 2008) in their lifetime. Researchers globally (Naicker 1994) indicate that people change jobs between five to ten times in their lifespan. Maree (2009) confirms regular changing of jobs to be a corresponding trend among South African employees.

According to Savickas (2011), the main form of work is still full-time employment with regular jobs but these jobs are mixed with projects. Practitioners are being hunted by industry for their specialised skills often only for the life span of a project. When the project is finished and the project team delivered the required product, members start looking for a new project. Savickas (2011) interprets the 21<sup>st</sup> century employee as ‘unbounded’ and ‘ungrounded’. Temporary and part-time employment therefore became commonplace. This phenomenon adds to the trend of flatter hierarchical structures in organisations (Savickas, 2011). A small core of permanent employees with a significant group of hired specialists (Maree, 2009) signifies many 21<sup>st</sup> century organisations. The relationship between organisations and workers also changed from relationships with a more permanent character and mutual loyalty to that of economically driven shorter term contracts.

The above mentioned trends and facts also impact career counsellors. The main purpose of career counsellors is to assist individuals to link their lives to the competitive economic context (Savickas, 2011). In this process counsellors need to take cognisance of the fact that employees experience low job security (Schreuder and Coetzee, 2010) and are insecure because of the character of their work. Stability made way for flexibility and mobility (Savickas, 2011). It also implies that individuals need to manage and shape their own careers. Schreuder and Coetzee (2010) call this phenomenon the protean career which is characterised by a high degree of mobility, self-reliance and internal career thinking. Pretorius and Morgan (2010) mention that in

the 21<sup>st</sup> century, employees need to be their own marketing instruments and they need skills to market themselves to future employers or as the best candidates for new projects.

### **2.3.1 World of work in South Africa**

South Africa is described as a predominantly third world (developing) country with a substantial first world sector and population (Maree, 2009). According to the Labour Force Survey by Statistics South Africa the unemployment rate was 25, 5% in 2012. A third of the youth aged 15-24 in South Africa is not in employment, education or training (Statistics South Africa, 2012). This group is considered vulnerable because they are disengaged from both work and education. It seems as if female youth are 8% more affected than their male counterparts. The unemployment level is drastically higher for individuals with lower educational levels than matric (grade 12).

These statistics and facts reveal the urgency to make career guidance, career education and career counselling much more available to all youth in South Africa for them to gather hope for their future (Maree, 2009). Career counselling provides vision to individuals to enable them to realise their potential and to open opportunities for informing them how to live meaningful lives. The majority of rural and township schools in South Africa do not have access to career counselling (Maree, 2009) which implies that they are not exposed to career education and training to be able to make informed career choices. In addition, they have limited knowledge and resources to manage their careers.

In the following two sections I explore what engineers do and their value to society firstly. Then I discuss how the world of the engineer in industry has changed and what is required from young graduates to be relevant in a globalised world.

## **2.4 WHAT IS ENGINEERING?**

To be able to understand what it means to be an engineer, the following description of engineering as used by the UNESCO report (2010) on issues, challenges and opportunities in engineering is useful.

Engineering is the field or discipline, practice, profession and art that relates to the development, acquisition and application of technical, scientific and mathematical knowledge about the understanding, design, development, invention, innovation and use of materials, machines, structures, systems and processes for specific purposes.

The word ‘engineer’ has its roots in the Latin word ‘ingenium’ which means ingenious or ingenuity meaning to devise in the sense of construct or craftsmanship, cleverness and invention (National Academy of Engineering, 2004, UNESCO, 2010). Engineers use scientific knowledge and mathematics to create technologies and infrastructure to address human, social and economic

concerns. Engineers connect social needs with innovation and commercial applications (UNESCO, 2010).

## **2.5 PROFESSIONAL DEVELOPMENT OF ENGINEERS**

Since 2000 several publications authored by academics and industry partners (Minor & Armarego, 2005, Case, 2006, Bridgstock, 2009) appeared on the attributes engineers need to stay relevant in industry in the 21st century. Industry's requirements of graduates often differ from what is taught in engineering curricula. In the following paragraphs selected models of attributes engineers need to be skilled or trained as effective practitioners will be discussed briefly.

As mentioned in the previous section on 'The world of work in the 21<sup>st</sup> century',<sup>2</sup> the environment and context in which engineers function have changed significantly in the past 50 years. New technology plays a major role. Industry partners and engineering faculties in the United States explored the attributes global engineers would need in the year 2020 against the background of these changes. The following table gives a summary and brief explanation of these attributes/competencies as predicted and foreseen by the National Academy of Engineering in the United States (2004).

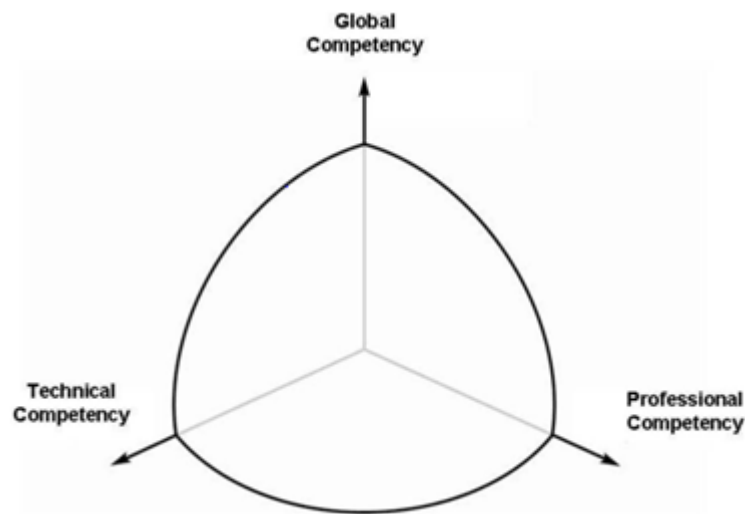
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<sup>2</sup> See Section 2.3, World of work in the 21<sup>st</sup> century, p. 13.

**Table 2.1:** Attributes of engineers in 2020, compiled from the National Academy of Engineering report (2004).

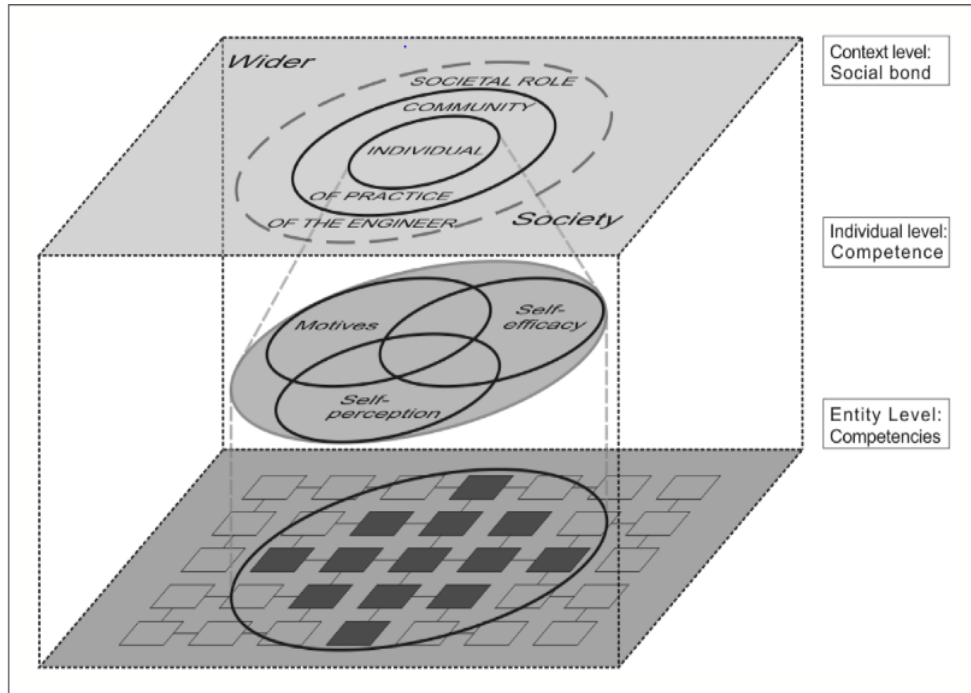
Attributes of engineers in 2020	Brief explanation
1.Strong analytical skills	The core activities of engineering design which are planning, structure, evaluating performance, and aligning outcomes to a desired objective, are reckoned as key attributes of engineers from the past, present and future.
2.Practical ingenuity	Engineers need to be able to identify problems and find practical solutions in relation to climate change, environmental issues and the intersections between technology and social and political policies.
3.Creativity	Creativity involves invention, innovation, thinking outside the box, and art. The complexity and diversity of the technologies in the 21 <sup>st</sup> century will require more creativity than before.
4.Communication	Engineering technologies involve multiple stakeholders. Interdisciplinary teams, global diverse team members, public officials, and a global customer base will necessitate an ability to listen effectively and communicate through oral, visual and written devices.
5.Business and management principles	Engineers who mastered business and management skills are often rewarded as managers and leaders in businesses.
6.Leadership	Engineering leadership needs to bridge the challenge between public policy and technologies.
7.High ethical standards and a strong sense of professionalism	Engineers in the 21 <sup>st</sup> century will benefit by having boldness and courage to make decisions which will infiltrate on multiple levels of society.
8.Dynamism, agility, resilience and flexibility	Engineers will need the ability to learn new things quickly and the ability to apply knowledge to new problems and new contexts.
9.Life-long learners	There will be a need for life-long learning not only because technology will change quickly but also because the career trajectories of engineers will take on many directions that include different parts of the world and different types of challenges, people and objectives.

A different way of organising these required attributes for engineers in a comprehensive way is to use the three axes model of Allert, Atkinson, Groll, and Hirleman (2007). They encourage engineering educators to recognise that engineering education comprises three axes and to change curriculums to meet competencies on all three axes in an attempt to meet the industry demand. These axes are (1) technical competency (mathematical, scientific and design competencies), (2) professional competency (teamwork, communication, business acumen) and (3) global competency (diverse worldview, cross-cultural competency, understanding international dimensions of own discipline).



**Figure 2.1:** The three dimensions of global engineering education (Allert, et al, 2007).

Walther and Radcliffe (2007) introduced a multi-scale systems model of engineering competence forming in graduates based on systemic and holistic perspectives which I find particularly relevant for this study. The relevancy of this model lies in its emphasis and acknowledgement of motives, self-efficacy and self-perception of the developing engineer. According to this model learning occurs on a 1) context, 2) entity and 3) individual level (see **Figure 2.2**).



**Figure 2.2:** Multi-scale systems model of engineering competence (Walther & Radcliffe, 2007).

The context level (upper level on the model) refers to the role of the engineer in his community of practice as well as in wider societal roles. This level illustrates the influence of the context on the individual. The entity level (lowest level on the model) refers to the competencies and attributes gained by the engineer on a micro-level which corresponds with the desired attributes for engineers in 2020. The individual level lies in between these two levels and represents the self-perception, self-efficacy and personal motives of the engineer. The competency level depends on the context level and is mediated by levels on the individual level (middle level on the model). The individual's self-perception, self-efficacy and motives are seen as regulatory mechanisms to utilise competencies from the entity level on the contextual level. Self-perception, self-efficacy and drivers are also shaped by the individual's functioning and feedback from society.

The multi-scale systemic model (Walther & Radcliffe, 2007) gives a holistic view of engineering competence and illustrates that development and growth occur intentionally and unintentionally. It often happens in engineering courses that the sense of self of engineering students is disregarded because of the high academic demands. Walther and Radcliffe (2007) suggest raising the self-awareness in students to develop their professional identity.

## 2.6 SENSE OF SELF

‘Sense of self’ in this study refers to self-concept, self-esteem, self-regard or self-perception. Carl Rogers fundamentally believed in the subjective frame of reference in individuals (Nelson-Jones, 2011). Rogers claimed that ‘man lives essentially in his personal and subjective world, and even his most objective functioning in science, mathematics, and the like, is the result of subjective purpose and subjective choice’ (Rogers, 1959, p. 191). This quotation confirms the prominence of the role of self in the forming and learning of engineering competence as proposed in the multi scale systems model<sup>3</sup> of Walther and Radcliffe (2007). Our sense of self is the vehicle through which we experience and interact with society.

Rogers (1959), distinguishes between self and self-concept. Self is viewed as the real, underlying or ‘organismic’ self (Nelson-Jones, 2011). Self-concept is the perceptions of the self or the values attached to these perceptions which do not always correspond with the organismic self. Self-concept is seen as the constellation of certain perceptions about the self. Rogers distinguishes between an effective sense of self and an ineffective sense of self. Effective self-concepts enable people to perceive their experiences realistically. The next section attempts to explore the essence of the sense of self in more depth.

### 2.6.1 What is sense of self?

Hewitt (1998) comments on the origins of self-esteem by noting that self-esteem does not arise from nothing and that self-esteem is formed through reflexivity which is the capacity to focus on one’s actions, thoughts and feelings. This process is called reflexive analysis flowing from the process of self-reference. According to Hewitt (1998) self-esteem develops to be an interpreted mood. Coopersmith (1967) defines self-esteem as follows:

By self-esteem we refer to the evaluation the individual makes and customarily maintains with regard to himself: It indicates an attitude of approval or disapproval, and indicates the extent to which the individual believes himself to be capable, significant, and worthy. In short, self-esteem is the personal judgement of worthiness that is expressed in the attitudes the individual holds toward himself (Coopersmith, 1967, p. 4).

The sense of self is a subjective mindset (Rogers, 1959) which is real and unique to every individual. Rogers affirmed that there are as many realities as there are people (Nelson-Jones, 2011). Rogers even claimed that the only reality people can possibly know is the world that they individually perceive and experience at the moment. Jung describes ‘the self’ as the unity of personality as a whole (Jung, 1976). He emphasises the fact that the sense of self includes both

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<sup>3</sup> See Figure 2.2. Multi-scale systems model of engineering competence (Walther & Radcliffe, 2007) p. 19.

conscious and unconscious components (Nelson-Jones, 2011). According to person-centered theory (Rogers, 1959), self-perception is a constant awareness of experiences which need not be expressed in verbal symbols. These perceptions are often acted on without being expressed by the individual. Perceptions may or may not correspond to reality or experiences of reality (Rogers, 1959). Nelson-Jones (2011) wrote about nine different characteristics of self-concept which is fundamental to person-centered theory which I find useful as background knowledge when working with the sense of self in clients. I will now discuss the nine characteristics of self-concept as according to Nelson-Jones (2011).

### **2.6.1.1 Characteristics of self-concept**

#### **i. Self-concept as content area**

The self-concept of people constitutes the way they describe and distinguish themselves by certain content areas such as bodily, social, sexual, feelings and emotions, tastes and preferences, work, recreation, intellectual activity, philosophy and values (Nelson-Jones, 2011). The importance attached to each of these areas varies for every person. An example would be for a person to describe him/herself as ‘I am a good skier’, ‘I like toasted sandwiches’ or ‘I am nervous around new people’.

#### **ii. Self-concept as structure or process**

Self-concept can be the means or process to interact with the environment in the way that people ignore, deny, distort or accurately perceive experience (Nelson-Jones, 2011).

#### **iii. Self-concept as central and/or peripheral**

Self-concept entails all the perceptions about self which are vital to people themselves and which may be regarded as our very essence. Some perceptions are more central than others. Every person orders self-conceptions in a unique way as either central or peripheral. The way people organise these conceptions are often implicit and not observable.

#### **iv. Self-concept can be congruent or incongruent**

Self-conception is congruent when the individual’s perception of self matches with reality as experienced by the individual. Incongruence exists when self-conceptions differs from the reality of what is experienced.

#### **v. Conditions of worth**

Incongruence entails that a self-conception is based on some condition to be valued as worthy by others/society which differs from the value system of the true self. An example of a condition of worth can be that a person wants to become a medical doctor, because of a value that



is internalised by his/her parents, but the person actually wants to become an artist which is congruent with his own perception of self.

**vi. Sublimal perception (subception) or defence**

Self-perceptions and experiences may be denied or distorted to defend existing self-perceptions and to prevent the individual from perceiving incongruence. Subception and defence may occur to prevent change in self-perceptions and behaviour and could hinder adaptability.

**vii. Intentionality and extensionality in self-concept**

Intentionality expresses characteristics of a self-concept that is in a defensive state. Examples are rigidity, non-adaptation and the absence of adequate reality testing. Extensionality describes characteristics of a mature self-concept by testing conclusions and abstractions against reality.

**viii. Levels of self-regard**

Level of self-regard can be described as the degree in which an individual prizes him/herself or to what level a person accepts him/herself.

**ix. Real and ideal self-concept**

Real self-perceptions represent who we really are. Ideal perceptions represent our self-conceptions on how we most like to be. Both real and ideal self-conceptions form part of our self-concepts. I will now briefly discuss the development of the sense of self in individuals.

**2.6.2 Development of the sense of self**

According to Adler (1932) key events and circumstances shape the perception of children about themselves. By the age of five this story, or "fiction", about themselves have solidified, according to Adler, and from this point on it would serve as the framework through which the child interprets and responds to events. Adler called the story we tell ourselves about ourselves (much of it unconscious) a "fiction", to distinguish it from who and how an individual really is. These stories from early years warn or comfort the self. It also helps the self to focus on goals and prepares the self to draw advice from these experiences in preparation to a plan and style of action (Maree, 2010b).

**2.6.3 Motivation and sense of self**

Staalvik and Staalvik (2005) wrote about the relation between self-concept and motivation. They mention how society's perceptions influence the measurement of human value in one's ability to achieve competently. Low marks in a student environment may be perceived as evidence

of low ability and could threaten self-worth. According to Staalvik and Staalvik (2005) people are motivated both to evaluate themselves favourably and to be favourably perceived by others.

Goal orientation also plays a role in motivation (Staalvik & Staalvik, 2005). Task orientation and ego orientation are differentiated. The focus in task orientation is on learning, understanding and developing of new skills as ends in itself. The mastery of tasks is seen as dependent on effort and perceptions of ability are self-referenced. Ego orientation refers to the desire to be judged as able. Social comparisons and ability depend on the norm the individual measures him/herself against. The goal with ego orientation is often to outperform others or to demonstrate superior ability.

#### **2.6.4 Sense of self and career**

Savickas (2011) refers to the capacity of humans to be conscious of their own consciousness using language to reflect on their own thinking to build the self. When clients are in need of career counselling their sense of self is often not aligned to their objective career (Savickas, 2011). Objective career refers to the different roles individuals occupy from school to retirement. From an early age clients build a picture or view of the self (subjective career). As the self develops, so does the subjective career (Savickas, 2011).

Language plays a central role in the process of conceptualising self or in constructing of the self (Savickas, 2007). Savickas mentions that clients form 'self-defining conceptions' about who they are and they tell stories about what they do. Maree (2010) describes the process of using autobiographical information and the ability of clients to say who they really are as narratibility.

### **2.7 NARRATIVE APPROACH**

Postmodern career facilitation is seen as the umbrella term (Maree & Malepo, 2007) for more qualitative approaches of which the narrative approach forms part. Postmodernism reflects the idea that knowledge is relative to specific contexts (Maree, 2004) in resistance to modernism which claims objectivity, universal relativity and certainty (Savickas, 1993). An open attitude toward diversity, different races, cultures, religions, moral convictions and sexual orientation brands postmodern opinions (Maree, 2004). Postmodernists believe that the universe cannot be understood objectively and that reality lies in the conventions of the observer (Maree, Ebersöhn & Malepo, 2006). The terms 'postmodern career counselling', 'qualitative' and 'narrative approaches' are often used inter-changeably.

A narrative approach is used when lived experiences are represented by words, text and stories (Becvar & Becvar, 1996). Narration provides structure which enables humans to express thoughts, experiences and dreams in a natural way (Barresi & Juckes, 1997). Clients have the

opportunity to express their meaning-making of personal and social situations – that which is valued by the client is articulated. The philosophical roots of both the narrative approach and postmodernism correspond with social constructivism. ‘Social constructionism is based on knowledge as a social construct, language as a social phenomenon and the individual as a rational person’ (Maree, Ebersöhn & Malepo, 2006). The self and the concept of 'truth' are viewed as a manifestation of human interaction. In career and life design counselling (Savickas, 2011) the counsellor enables the client to connect experiences from the past, in the present and future with systemic influences in their context (McMahon, Patton & Watson, 2003) to find a golden thread forming a pattern toward career themes (Savickas, 2011). This process is enabled by language and communication within a relationship and a social interactive situation.

Meaning-making is at the core of the narrative approach. Savickas (1993) emphasises the importance of purpose for clients. Personal constructs justify and enable the process of meaning-making in narrative enquiry and exploration (Chen, 2007). A career is a vehicle of meaning (Cochran, 1997) showing how one has evolved and how experiences contributed to the stimulation and fulfilment of purpose. In examining human need for meaning, Yalom (1980) mentions the interwovenness of meaninglessness with leisureliness and disengagement. The essence of narrative career theory is that career experiences (as other experiences) are representations of the interaction between the individual’s subjective contact with numerous contextual influences in social and in environmental circumstances (Chen, 2007).

The narrative approach views the individual as the expert on his/her own life (Maree, Ebersöhn & Malepo, 2006). When a client tells his/her story he/she is the narrator or teller of the story, but also the actor and main character in the story. The counsellor takes the role of a spectator at first witnessing the experiences as presented/framed by the client. The counsellor overhears the meaning making (Cochran, 1997) of the client on his own life story. The story/drama may or may not be real providing ‘signature’ information (Maree, Ebersöhn & Malepo, 2006) in idiosyncratic versions (Maree, Ebersöhn & Malepo, 2006) to facilitate reflective self-advice (Maree, 2012) in career counselling. In the following paragraphs I will discuss Career Construction Theory which forms the theoretical background of the enquiry.

## **2.8 THEORETICAL FRAMEWORK**

According to Maree and Van der Westhuizen (2009), a theoretical framework locates a research project to indicate the origin of the inquiry. The Career Construction Theory (CCT) developed by Savickas (2005) provides a clear roadmap and theoretical foundation for this study.

### 2.8.1 Career Construction Theory (CCT)

Career Construction Theory (CCT) is about how individuals select work and adjust to work (Savickas, 2005). CCT is based on the concept that individuals create careers by making meaning from personal career experiences. By investigating their responses and actions to these experiences brings understanding and insight—it is a subjective route. The objective definition of career indicates the sequence and number of jobs occupied by a person from school through to retirement. The subjective definition in CCT indicates the emerging pattern of work experiences. Such a pattern or patterns in the life of a client is viewed holistically with the support of a career counsellor to form a meaningful story (Savickas in Brown & Lent, 2012). CCT views careers from a constructionist and contextual perspective by focusing on interpretive processes of social interaction and the negotiation of meaning. Career Construction Theory considers three perspectives of vocational behaviour (see Figure 1.1). Savickas derived the tripartite framework of organising personality theories as a foundation from McAdams (1995). Career construction theory as the overarching comprehensive theory has three classic theoretical segments or perspectives<sup>4</sup>.

The differential and developmental perspectives remain useful to fit workers to work and to develop careers based on the readiness of an individual for a position within an organisation (Savickas, 2005) but there are questions and dilemmas created by the global economy that impose new challenges on careers. These challenges call for less objectivity and for greater focus on the subjective careers of individuals. Maree (2012) therefore indicates the value of blended theoretical dimensions which create an overarching and user-friendly approach (Maree, 2010) to career counselling to stay useful to clients.

The dynamic perspective adds a narrative, psychodynamic approach to career counselling where patterns, themes and meaning are inherent and elicited from the individual's emerging life stories and experiences. There is also focus on the spirit and values that guide the choices and adjustments that build a career (Savickas, 2005). This subjective approach is linked to the sense of self of individuals.

Maree (2012) enhances this perspective by adding existential-phenomenological underpinnings to this approach. It entails the prospect of guiding clients to reflect and meta-reflect on their career related responses. Maree states this as a strategy to assist career counsellors to be useful to clients in choosing appropriate careers and in assisting them to use these careers to construct themselves and to live successful lives.

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<sup>4</sup> See Figure 1.1, A diagram of the Career Construction Theory, p. 8.

## **2.8.2 Four cornerstones of career construction theory**

The following section describes the essential elements, also called the four cornerstones (Hartung, 2007) of the career construction theory. These elements are life structure, career adaptability, life theme and personality style. In the following sections I plan to discuss these concepts to elaborate further on the usefulness of the CCT.

### **2.8.2.1 Life structure**

Life structure refers to the relative importance of different social roles in the life of an individual. Career Construction Theory designates social roles as one of the cornerstones for understanding vocational behaviour (Hartung, 2007). Clients often seek career counselling at times of a role change or when they want to re-arrange their life structures into a different pattern of life roles (Savickas, 2002). The importance of life roles (roles in family, play and leisure, school, work, community that are relevant over the life span) is of relative importance to each person. It is important for the career counsellor to determine the importance of specific life roles to the client. Examples of change in life structure are when a person gets married or becomes a parent for the first time, when a person is retrenched from a company or when someone moves from one town/city to another. Life roles can be influenced by personal, structural and cultural factors, such as gender expectations, social class, discrimination, personal choice and family expectations. In vocational counselling the CCT recognises how work/career can be experienced relative to the different contexts in our lives (Hartung, 2007).

### **2.8.2.2 Career adaptability strategies**

Career adaptability is regarded as the second cornerstone of CCT (Hartung, 2007). The career adaptability dimension focuses on the developmental tasks and transitions individuals deal with as well as the coping strategies used to overcome or cope with these changes. The CCT incorporates the developmental career stages as described by Super (1990) in the life-span. These stages are 1) growth, 2) exploration, 3) establishment, 4) management and 5) disengagement. Each stage has a primary adaptive goal and certain tasks to be dealt with to go effectively through to the next stage. Each of these stages has a goal applicable to the self-concept of the individual which I found relevant for this study. The goals strived for in each stage are listed in the **Table 2.2**.

**Table 2.2:** Developmental career stages (Super, 1990).

Career stage	Goal regarding self-concept
1. Growth (age 4-13 years)	Forming an initial and realistic self-concept. The self-concept is based on the individual's own answer to the question of 'who am I'? Mental presentations of strengths, limitations, interests, values, abilities, personalities and talents are formed.
2. Exploration (14-24 years)	In this stage the individual focuses on gathering information about self and occupations to be able to construct a career.
3. Establishment (25-44years)	Implementing the self-concept into an occupational role to establish cohesion between a person's inner and outer world to provide meaning in life (Savickas, 2002).
4. Management (45-65 years)	During this career management stage people should adapt to changes in self and occupations by re-exploring and re-establishing themselves in new careers and social roles (Hartung, 2007).
5. Disengagement (65 years and older)	In this stage individuals exchange work roles for devoting more time in other 'theatres' (Hartung, 2007). The self needs to be implemented in a new position to find meaning which often necessitates going back to the phases of exploration and establishment to find alternative work opportunities.

Career adaptability which comprises the attitudes, beliefs and competencies in these stages is used by the individual to solve problems and to put behaviours in place to align the self-concept with work roles over the life course (Savickas, 2005b). Maree (2012b) points out the relevance of adaptability for its value in career development, preparation to assist clients to cope with change and its positive correlation with the changes in technology and the economy. Career adaptability encompasses four dimensions (Savickas, 2005, Savickas, et.al, 2009), namely concern, control, curiosity and confidence. Each dimension refers to a developmental task (Maree, 2011). These four dimensions are discussed in the following paragraphs.

**Career concern:** The first dimension is a client's personal concern with his/her career, the extent to which he/she believes they have a future that is worth preparing for and that such preparations will improve their future.

**Career control:** The belief clients hold that they themselves are responsible for the construction of their careers. It also touches on the feeling of optimism in clients about owning their future (agency).

**Career curiosity:** This dimension relates to feelings of inquisitiveness and industriousness to learn more about types of careers and the opportunities that go together with these occupations.

**Career confidence:** The two related components in career confidence is the capability to solve problems and the belief that people can act effectively.

A deficiency in any dimension of the career adaptability model can lead to distinctive difficulties in making career choices (Savickas, 2011) and would delay clients from taking action to develop their careers.

### **2.8.2.3 Life theme stories**

The third cornerstone (Hartung, 2007) of the CCT is life themes that are derived from life stories. Life themes refer to the motives and drivers in the form of needs, values and interests that bring meaning to careers and to life in general. Savickas (2005b) refers to life themes as the ‘private meaning’ that explains life structure, adaptability strategies and personal style in individuals.

Life themes claim career as a self-conceptualising activity that gives meaning and direction in vocational behaviour. Meaning-making enables the individual to implement a self-concept in work and ‘to take who one perceives oneself to be, and realise that image in an occupational role’ (Hartung, 2007, p. 111). As individuals construct a career an on-going process of adaptation and change occurs to match the self and situation enhancing the self-concept. Work is used to develop the self and also to benefit society in a meaningful way. Career counselling is useful to identify themes to indicate life purpose, meaning, direction and coherence (Hartung, 2007).

### **2.8.2.4 Personality style**

Personality development or the match between a person and his/her environment is regarded as the fourth cornerstone in CCT (Hartung, 2007). Personality style refers to the individual differences (also mentioned in the differential perspective<sup>5</sup> in CCT) such as values, abilities, needs and interests (Savickas, 2005). According to the CCT, family or origin shapes personality which is further developed by society and by participation in different societal roles in school and community. The self-concept is shaped through the practical experiences of engaging in the world of work. The personality traits as represented in values, abilities, needs and interests are dynamic and may change over the person’s life time due to accumulated experience engaging in vocational activities. The formation of these traits develops in a unique style that characterises personality (Hartung, 2007). When needs, interests and life experiences change, the career of an individual could be re-designed (Maree and Di Fabio, 2012). The purpose of applying career

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<sup>5</sup> See Figure 1.1, A diagram of the Career Construction Theory, p. 8.



construction theory in career counselling ultimately is to enable career counsellors with the important task of being useful to clients in designing a life that is experienced by individuals as satisfactory and meaningful.

## **2.9 CAREER COUNSELLING IN THE 21ST CENTURY**

The overarching goal of career counselling is to clarify the client's self-concept and to implement the self in the world of work (Taber, Hartung, Briddick, Briddick, & Rehfuss, 2011). Traditional approaches to career counselling where individual differences and objective measures are the main determinants of self-exploration and work self-concept discard many indispensable dynamics. Factors such as interests, values, needs, abilities and traits are often de-contextualised when they are only measured objectively through questionnaires. The narrative approach as described previously through the use of the Career Construction Theory (Savickas, 2005) transformed career counselling into a more 'robust, subjective, therapeutic endeavour' giving individual work lives more meaning (Taber et al, 2011).

Savickas developed a model of career counselling in the Career Construction Theory (CCT) which distinguishes career counselling from vocational guidance and career education. Vocational guidance which links with the differential approach, places individuals in the world of work and matches traits to positions. Career education, which links with the developmental approach, teaches individuals about developmental tasks, adaptability to certain stages and implements career coping. The Career Counselling Model (Savickas, 2011) focuses on the interpersonal process useful to clients in constructing a career. Practitioners need to decide which intervention would suit both their client and the situation best to fulfil the needs of their client.

### **2.9.1 What is career counselling?**

To get an indication of what career counselling is, the meaning of the two words will first be explored independently.

#### **2.9.1.1 Counselling**

Both unconditional positive regard and empathy are essentials when counselling clients (Rogers, 1942). The author proposed counselling as a relationship that is based on the warmth and the responsiveness of the therapist. Rogers proposes that clients should not be told how to change but be helped to express, clarify and gain insight into their emotions. The counsellor shows unconditional positive regard and empathy to clients (Rogers, 1942). The Committee on Definition (1956) of the American Psychological Association defines 'counseling' as a process to help individuals toward overcoming obstacles to their personal growth, wherever these may be encountered, and toward achieving optimum development of their personal resources. Atkinson



(2002) adds that counselling is a profession that deals with personal, social, vocational, empowerment and educational concerns of people who are within the ‘normal’ range of functioning. Atkinson signifies career counselling as a subspecialty of counselling. Henderson and Thompson (2011) view counselling as a relationship that involves the meeting of two people so that one person can help the other resolve a problem. Unconditional positive regard involves caring about, respecting, liking and accepting clients without applying any conditions on them to act, feel, or think in certain ways. Empathy on the other hand is the ability to have a truthful sense of what people are thinking, feeling and experiencing and to be able to communicate that understanding to them (Henderson & Thompson, 2011).

### 2.9.1.2 Career

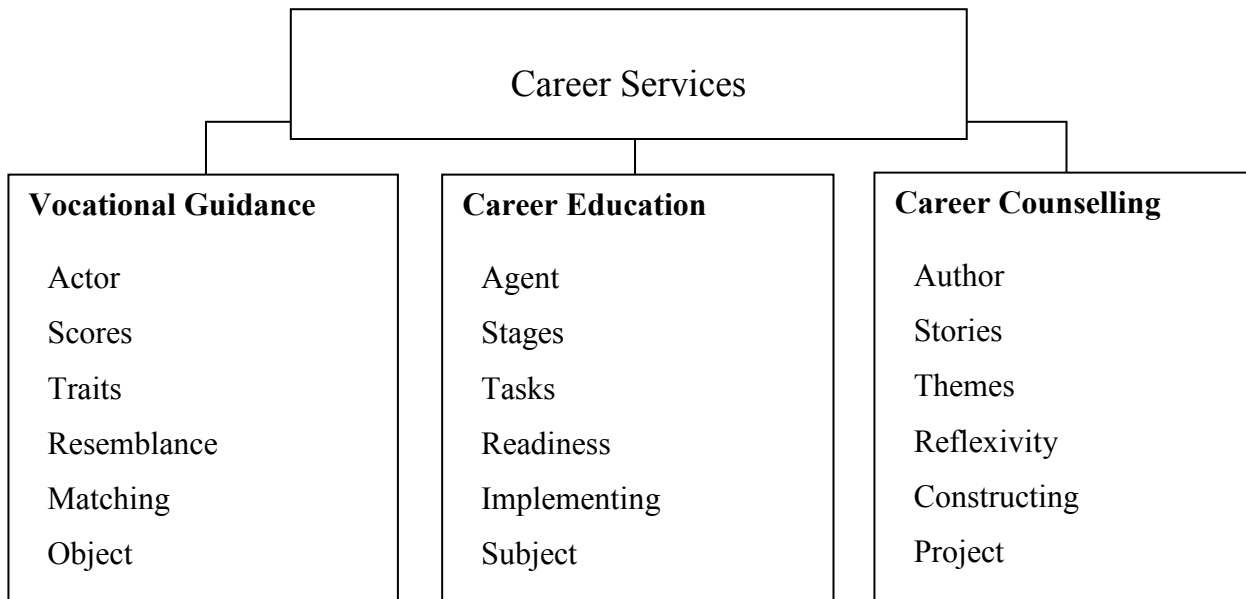
‘Career’ can be defined as ‘a series of jobs in a profession or occupation that a person has through their life’ or ‘part of a person’s life spent in a particular occupation’ (Collins, 2011). Savickas refers to the original meaning of the word ‘career’ as ‘care’ and not as ‘path’ (Maree, 2010b). The term ‘holding environment’ is used in literature (Winnicott, 1965; Savickas, 2009; Maree, 2012) referring to the concept of parenting. Most often mothers and care givers carry and protect little ones by holding them. ‘Holding’ refers to dependency of the baby, but also the role of the parent creating an environment of security. Early in our lives, we are held by our parents, schools and the university environment where the atmosphere is caring, reasonably safe and also directive. As we mature, we should ‘hold’ ourselves and use career as “a carrier (or holder) of meaning” for continuity (Maree, 2012) at crossroads in our career and during life transitions. I will now discuss ‘career counselling’ as a single concept.

### 2.9.2 Career Counselling

In 1951 Donald Super defined ‘career counselling’ as

[T]he process of helping a person to develop and accept an integrated and adequate picture of himself and of his role in the world of work, to test this concept against reality, and to convert it into reality, with satisfaction to himself and benefit of society (p. 92).

This definition corresponds and resonates with the development of the sense of self of clients who are at a crossroads in their career path. According to Super (1951) career counselling refers to an individual’s perception of self and his work role, and to evaluate, develop and implement these perceptions in a realistic and meaningful way both for the individual and community at large. Savickas (2011) explains the place of career counselling by charting the differences between guidance, education and counselling (see **Figure 2.3**).



**Figure 2.3:** A comparison of guidance, education, and counselling (Savickas, 2011, p. 7).

According to the diagram, vocational guidance operates from an objective perspective to explore individual differences. Clients are viewed as actors whose traits are scored to match with people in occupations resembling similar traits. Career education operates from a subjective perspective focusing on the development of individuals. The agency of clients is recognised by exploring their readiness to involve themselves in certain developmental tasks appropriate to their life stage. Clients are supported to implement new attitudes, beliefs and competencies to take their careers forward.

Career counselling is seen from the ‘project perspective of individual design’ (Savickas, 2011, p. 8). Viewing the self as a project incorporates both the objective personality and a subjective self-concept (Savickas, 2011b). Tiedeman and Field (1962) refers to the self-concept as a process (dynamic) which simulates the idea of a project opposed to self-concept as being a state or a trait (static). Tiedeman and Field also consider self-concept as a self-organising system which contains creativity and adaptability for human beings to adjust to the changing environment. He talks about the process of giving meaning to the self-in-experience and he terms it ‘self-conceptualising’ (Field, Tiedeman and Kehas, 1963). Savickas rephrases ‘self-conceptualisation’ as conceptions to order experience and anticipate the future (Savickas, 2011b). He encourages counsellors to assist clients to become aware of how they organise their experiences into self-concepts and to understand that the building of self-concept and identity is a project of the self. The role of the career counsellor is to assist the client to reflect on themes from their lives. The counsellor takes the role of a mirror to reflect back to the client the stories and life experiences

they bring to the counsellor. The content is used by the counsellor to assist the client to see emerging patterns or themes which inform the client on how to build (construct) their lives in future.

Adler (1932) and Maree (2012) use the term ‘reflective career counselling’ to refer to the process whereby clients reflect on their own life story facilitated by a career counsellor. Together with the career counsellor, the client has the opportunity to listen to him/herself but also have an audience in the person of the counsellor to reflect on their reflections. This meta-reflective process (Maree, 2012) allows the client to identify themes/patterns from personal experiences alongside the counsellor. Meta-reflection facilitates the process of life design where clients use their life stories to inform themselves about their awaiting futures (Maree, 2013). The next section will specifically explore narrative career counselling.

### **2.9.3 Narrative career counselling**

At a time when workers are easily retrenched and have to restructure their lives and occupations, workers have to ‘let go of what they did but not who they are’ (Savickas, 2011, p. 37). A narrative or a life story can become a container or vehicle which holds the self in spite of changing circumstances and contexts. Career counsellors using constructionist principles make use of narrative psychology by helping clients to disclose and develop their life stories to hold them and to bring more certainty in changing environments. Narrative counselling assists clients in constructing their own identity to develop a subjective career and self which brings meaning and direction when encountering losses of ‘position, project’ or ‘place’ (Savickas, 2011).

The counsellor needs to be able to help clients understand the implications of the narratives told. Savickas (2011) mentions the importance for counsellors to use the metaphors clients used and to repeat their words elaborating the language clients use to describe their experiences. When clients tell their stories they increase personal comprehension (intelligibility), coherence (self-consistency and integrity), and continuity (longer maintenance of meaning) (Savickas, 2011).

Narrative career counselling is about ‘a relational, conversational encounter during which learning and growth occur through storytelling’ (Savickas, 2011, p. 41). Through the dialogue between the counsellor and client, the client gets the opportunity to evaluate and study his/her preferences in depth to make meaning and draw purpose from them. The process of narrative career counselling brings about transformation (Savickas, 2011) as purpose begins to take practical form. As purpose starts to realise in the life of a client, possibilities open to exercise agency which brings motivation to move forward and implement possible changes. In the next section career intervention will be discussed.

## 2.10 CAREER INTERVENTION IN THE 21<sup>ST</sup> CENTURY

In my research, the research participant will participate in the research project over a period of eight to nine sessions. Transformation is likely to take place over this time on the perception of the individual sense of self. The Penquin Dictionary of Psychology (2001) defines ‘intervention’ as ‘any procedure or technique that is designed to interrupt, interfere with and/or modify an on-going process’. Without these sessions the participant’s perception of self will probably be stagnant and less adaptable to the changing context of his work environment. The research project can therefore be viewed as an intervention and/or an attempt to develop the current self.

The 21<sup>st</sup> century paradigm in career intervention, based on Career Construction Theory (CCT), moved from actualising (Maslow in Mcleod, 2007) an existing core self (modernist view, 20<sup>th</sup> century career theory) to constructing the self as a life project by establishing a ‘grounded sense of self’ (Savickas, 2011). Borgatti (1996) defines ‘grounded theory’ as being ‘developed inductively from ... data’. Inductive reasoning begins with specific observations, detection of patterns and the forming of a hypothesis that can be explored to develop conclusions (Trochim, 2006). In 21<sup>st</sup> century career intervention, the self is explored from outside in using interpersonal experiences in particular to be informed. The self is co-constructed (Savickas, 2011) by making sense of and becoming aware of the self as a separate person (objectifying) by reflecting on events and attributes. What is in the self is used by the self to advise him/ herself on the future. In Career Construction Theory (CCT) these processes are referred to as biographicity and identity work (Savickas, 2011).

Savickas coined the term ‘biographicity’ (Maree, 2010c) and defined it as ‘the self-referential process by which individuals integrate new and sometimes puzzling experiences into their biographies (Savickas, 2011). This signifies a client’s ability to draw on his or her autobiography to negotiate transitions (Maree, 2010c). ‘Identity work’ is referred to as the process of identity construction and revision to cope with the uncertainties provoked by life tasks, transitions and traumas which include activities of ‘forming, repairing, maintaining, strengthening and revising’ the self. The sense of self is built /constructed to inaugurate a ‘sense of coherence and distinctiveness’ (Savickas, 2011). Sense of coherence (Antonovsky, 1987) refers to a person’s view of life and their capacity to respond to stressful situations with understanding (comprehensibility), managing it (manageability) and deriving meaning from that (meaningfulness). Distinctiveness is defined by the Oxford Dictionary as ‘a characteristic of a person which distinguishes himself from others’ (Simpson & Weiner, 2007). Career interventions enable clients through narrating their story to capitalise on or obtain advantage from their identity.

Clients get to *know*, *like* and *use* their own story (Savickas, 2011) to create change and start moving in a different direction.

### **2.10.1 Intervention model**

From his Career Construction Theory (CCT) Savickas (2011) created an assessment protocol based on the grand theory (Maree, 2010c). The assessment protocol consists of eight steps which is a strategy (Maree, 2013) to enable clients to create ‘idiosyncratic vision and mission statements’ (Maree, 2013, p. 81) or life portraits (Savickas, 2011). Savickas (2011) created the following eight-step plan to draw up life portraits with clients which form part of the intervention to develop the sense of self of the participant.

**Table 2.3:** Eight-step strategy for crafting a life portrait (Savickas, 2011) as summarised in Maree (2013).

	<b>Activity</b>	<b>Rational</b>
Step 1	Client responds to the question: How can I be useful to you?	The client's goals for seeking career counselling are determined.
Step 2	Client's three earliest recollections	Central life dilemma or core problem is identified.  First story: core problem or preoccupation Second story: confirm the problem or like the third story, it proposes a solution to the problem
Step 3	The people admired mostly by the client before the age of six (role-models).	Determines the client's self-concept, central life goals and possible solutions to his/her central life problems.
Step 4	Client's favourite magazine, TV programme and website.	Determines the setting or environments which best fit the client's lifestyle.
Step 5	The client's favourite story book or movie	Portrays a character that faces similar challenges as the client and the client relates to the way the character solved the issue. A script is provided of how change can happen from one setting to another.
Step 6	The client provides his/her favourite quotes or motto's.	These sayings provide self-advice for a given point in time.
Step 7	Analysis of different fields of study / occupations that is appropriate for the client.	
Step 8	Response to the original request of the client as motivation for career counselling.	

Maree (2013) elucidates the Savickian notion of a life portrait and links the concept to the significance of personal vision and mission statements. By composing a life portrait, the client reconstructs his/her past in ways that can anticipate the future and encourage action (Savickas, 2011). Savickas (2011) proposes five general principles which enable the counsellor to assist clients in crafting life portraits. These principles guide counsellors to 1) facilitate the best possible version of the client's life at the time, 2) create a narrative that would concentrate on possibilities for growth, 3) focus on stimulating themes that would promote and advance the career plot

(Maree, 2013), 4) create an intelligible, authentic (Maree, 2013), consistent life portrait with sustained meaning, 5) consider the meaning and interpretation of client's stories.

Interventions used by career counsellors to develop the client's grounded self (Savickas, 2011) focus on employability, adaptability, emotional intelligence and lifelong learning (Savickas, 2011). These constructs becomes the currency clients need to capitalise on their identity, but these are also the goals to strive for to survive the 21<sup>st</sup> century workplace. Each of these constructs will be explored in the next sections.

### **2.10.1.1 Employability**

Labour markets in Western economies are changing in response to globalisation, technology and competitive pressures. Career structures are less traditional. Previously career structures assisted individuals to linearly progress through the hierarchy in one organisation. Organisations are 'slimming down and speeding up' (Bridgstock, 2009) and need mobile adaptable workers who can be productive by engaging with companies through different social contracts (Savickas et al, 2009) such as part-time work and self-employment opportunities (Bridgstock, 2009) because of global economic pressures (Savickas et al, 2009). The Department of Education, Employment & Training in Australia (2000) defined employability based on work done by the International Labour Organisation and stated that employability

[Involves] self-belief and an ability to secure and retain employment. It also means being able to improve ... [the worker's] productivity and income-earning prospects. This often requires competing effectively in the job market and being able to move between occupations as necessary. It requires 'learning to learn' for new job opportunities (p. 37).

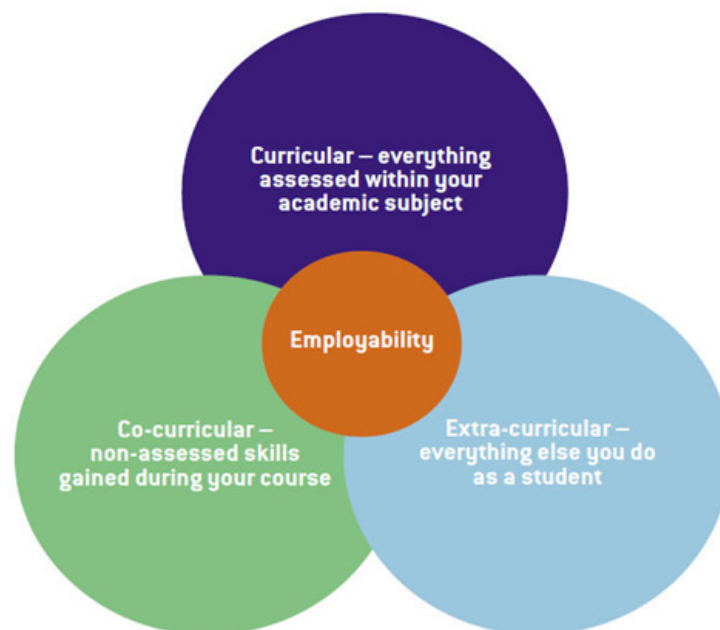
Fugate, Kinicki & Ashforth (2004) defines employability as follows: 'Employability is a psycho-social construct that embodies individual characteristics that foster adaptive cognition, behavior, and affect, and enhance the individual-work interface' (p. 15). Savickas et al, (2009) defines employability as the capacity of individuals to have skills, knowledge and attitude to engage and re-engage in employment. These definitions accentuate workers' individual responsibility for their personal careers. Proactive attitudes provide employees with a measure of perceived control which is not found in those with passive or reactive orientations (Fugate et al, 2004). Employees are often insecure and need to enhance their skills and knowledge to develop an attitude conducive to the context in which they work (Savickas, 2011).

#### **i. Graduate employability**

Another definition of employability as defined by The Confederation of British Industry (1999) is 'the possession by the individual of qualities and competencies required to meet the

changing needs of employers and customers’ (p. 1). Students’ motivations for entering higher education are often different to industry wants and needs. Reasons provided by students for attending higher education were mainly instrumental (‘to get a (better) job’, ‘to gain entrance into a well-paid career’, ‘to have a professional career which needs a particular qualification’) (Watts, 2006; Bridgstock, 2009). Universities often concentrate on technical content related to specific fields only and neglect the preparation of students for a constantly changing world of work. Adequate transition skills from being a student to being an employee is often lacking in graduates (Bridgstock, 2009). Adequate preparation would include preparation for transition to the world of work, maintaining employability once there, clarification of personal aims and abilities, understanding the requirements of the labour market and the ability to actively engage in the career building process (Bridgstock, 2009).

The University of Liverpool, in the United Kingdom explains employability to their students as three interlocking circles clearly indicating the necessity of achievement in the curricular, co-curricular and extra-curricular spheres (see **Figure 2.4**).



**Figure 2.4:** Employability as three interlocking circles as presented by the University of Liverpool, UK (<http://www.liv.ac.uk/careers/students/employability>).

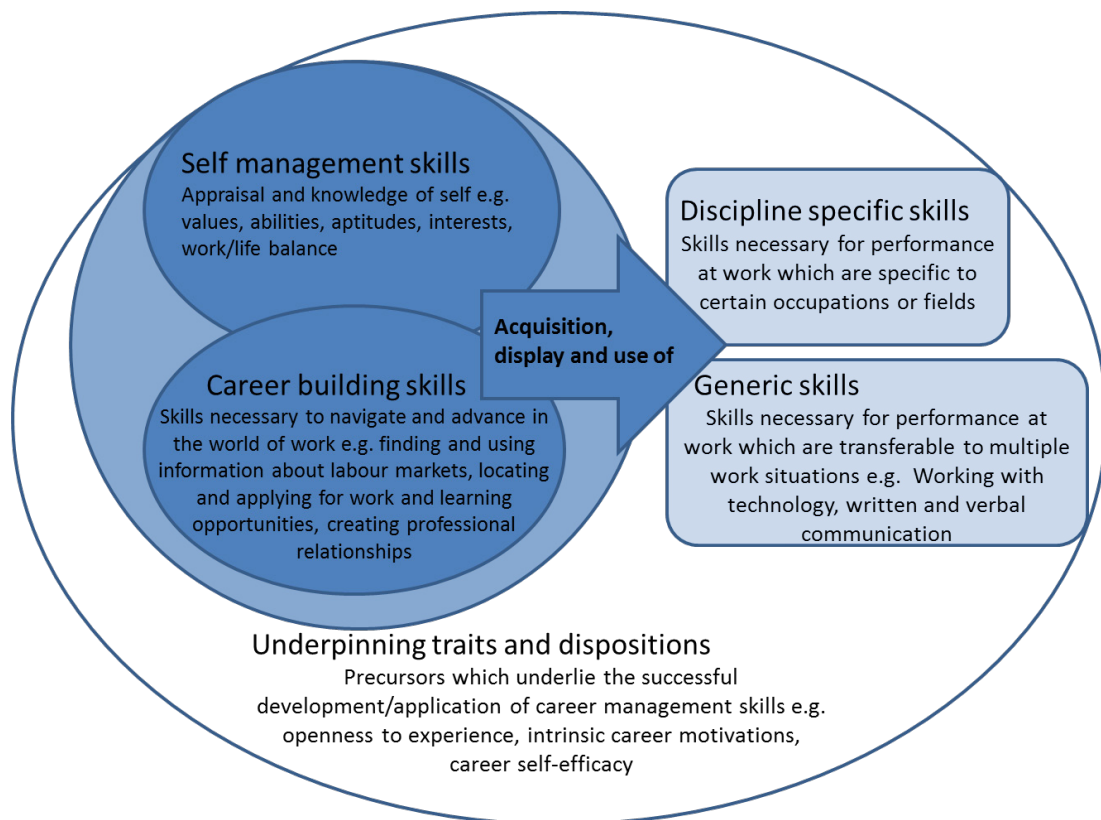
Employability requires achievement in all three circles. The curricular circle represents the subject specific content of the study field, e.g. BSc in Mechanical Engineering. Co-curricular activities are not assessed during the course, but developed as a consequence of being part of the course, such as team work, personal tutoring, administration, presentation skills and time



management. Extra-curricular activities such as financial management abilities, being able to drive a car, owning and maintaining a vehicle, building a social network, social and emotional skills to connect with others, abilities to formulate goals and achieve them, playing a musical instrument, being part of a sport team are also examples of employability factors for students when changing from university to industry. When these three circles are not balanced, narrower employability skills are obtained in the study years.

## ii. Career management skills

Bridgstock (2009) emphasises career management skills as an inclusive part of employability. Career management skills as defined by Bridgstock (2009) are ‘the abilities required to proactively navigate the working world and successfully manage the career building process, based on attributes such as life-long learning and adaptability’ (p. 34). The relevance of the following model for my study is the contemplation of different building blocks to unpack graduate employability. In the attempt to develop the sense of self of an individual to flourish in a new work environment after graduation, the constructs of self-management skills, career building skills, discipline specific skills, discipline specific skills and generic skills are relevant for brief discussion (see **Figure 2.5**).



**Figure 2.5:** Conceptual model of graduate attributes for employability including career management skills. (Bridgstock, 2009, p. 36).

*Self-management skills* refer to the skills that relate to the individual's perception and appraisal of him/herself. According to Bridgstock (2009) self-management skills refer to individual values, abilities, interests and goals. These aspects link to career identity which refers to the congruence between aspects in the individual and his/her career roles (Day & Allen, 2004).

*Career building skills* refer to the skills related to finding and using information about careers, labour markets, the world of work to locate, secure and maintain work and to exploit possible opportunities for gaining advancement or other desired outcomes (Bridgstock, 2009).

*Underpinning traits and dispositions* according to Bridgstock (2009) are the precursors for successful development and application of career management skills. Evidence seems to indicate that certain traits such as openness to experience, agreeableness, sociability, self-confidence and initiative link with higher earnings in the workplace (OECD, 2002).

*Discipline specific skills* are the skills and knowledge traditionally included in university curricula to address specific occupational requirements.

*Generic skills* refer to the attributes that employers would assume students gain at university such as information literacy, working with technology, written and verbal communication, working in teams and numeracy.

The balance between 'orthodox pedagogy' and the 'broadened employability agenda' (Bridgstock, 2009) at university education level is unclear. Although tertiary curricula are already crowded (especially engineering courses) the under-emphasis of career management skills would produce professionals with low employability benefits to industry. The current turbulent career environment globally requires individuals to continually manage themselves and their contexts in which adaptability is a salient attribute and commodity. In the section to follow 'adaptability' will be discussed as another goal of career intervention in the 21st century.

#### **2.10.1.2 Adaptability**

We are becoming fluid and many-sided. Without quite realizing it, we have been evolving a sense of self, appropriate to the restlessness and flux of our time. This mode of being differs radically from that of the past ... We feel ourselves buffeted about by unmanageable historical forces and social uncertainties ... our behavior tends to be ad hoc, more or less decided upon as we go along ... But rather than collapse under these threats and pulls, the self turns out to be surprisingly resilient ... We find ourselves evolving a self of many possibilities (Lifton, 1993, p. 1).

Adaptability is part of the individual's essential attire to survive and cope in the 21<sup>st</sup> century workplace. Collins (2011) defines adaptability as to 'modify to suit a new or different

purpose' or condition. As described before in this dissertation<sup>6</sup> the work context is fluid (Fugate et al, 2004) and is constantly changing. Employees need effective coping skills to deal with loss such as the retrenchment of a valued co-worker, loss of job security and loss of the sense of self as linked to work and meaning.

Individuals in the workplace are required to continually manage change (Fugate, et al, 2004) and hone the willingness and attitude to adapt for career success. Employees who are adaptable are characterised to sometimes initiate change through proactive behaviours, personal initiative, proactive personality skills, to take charge, and participate in proactive socialisation (Fugate et al, 2004). These constructs are person-centered and exemplify the responsibility for career management and development from employers to employees (Hall, 2002).

Maree (2011) points out the relevance of adaptability in Career Construction Theory for its value in career development, preparation to assist clients to cope with change and its positive correlation with the changes in technology and the economy. Career adaptability comprises four dimensions (Savickas, 2005, Savickas, et.al, 2009) – concern, control, curiosity and confidence; each respectively referring to a developmental task (Maree, 2011) which was discussed in a previous section of the chapter<sup>7</sup>. Another goal for career intervention in the 21st century as mentioned by Savickas (2011) is emotional and social intelligence (ESI) which will be discussed in the next section.

### **2.10.1.3 Emotional and social intelligence (ESI)**

The definition by Bar-On (2006) of emotional intelligence relates to a person's emotional, personal, social and survival skills rather than to his /her cognitive or intellectual skills. This definition is preferred above other definitions of ESI due to Bar-On's (2006) agreeing/acceptance that ESI can be acquired and developed. Bar-On defines emotional and social intelligence as the manner in which people understand themselves and others, as well as their ability to form relationships with others and to adapt to their immediate surroundings (Maree & Bester, 2006). The final goal mentioned by Savickas (2011) in career counselling and intervention in the 21<sup>st</sup> century is the importance of life-long learning. Life-long learning will be discussed in the next section.

### **2.10.1.4 Life-long learning**

Clients should strive to attain stable lives and career security on flexible employment through life-long learning rather than by striving to find secure employment (Savickas, 2011). Viewed from this perspective, career counsellors would often encounter clients who need

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<sup>6</sup> See Section 2.3, World of work in the 21<sup>st</sup> century, p. 13.

<sup>7</sup> See Section 2.8.2.2, Career adaptability strategies, p. 26.

assistance encountering new learning opportunities which would enhance meaning and purpose in their careers.

In their report on the attributes for engineers in 2020<sup>8</sup>, the National Academy of Engineering in the United States (2004) pointed out life-long learning as one of the nine most important attributes engineers would need. This attribute is motivated by stating that in 2020 ‘there will be a need for life-long learning not only because technology will change quickly but also because the career trajectories of engineers will take on many directions that include different parts of the world and different types of challenges, people and objectives’ (p. 18).

The value of lifelong learning is emphasised by Maree (2009) so that workers keep up with change to be able to stay relevant and marketable. Together with continuous learning a clear understanding of their skills, value and potential enable clients to utilise what they possess to challenge problems on their career path.

## 2.11 SUMMARY

The aim of this chapter was to design a specific framework for interpreting my research results, which include data on the sense of self of a young individual in engineering. The chapter was introduced by the metaphor of a constellation which has orientation and navigation functionalities in astronomy. Narratives resemble similar functions as constellations. Stories contain the self and form identifiable patterns and themes of behaviour and perceptions revealing motivations and meaning-making to guide clients in career decision making.

The volatility of the world of work globally and in South Africa was explored next and the professional development of engineers and their preparation for the 21st century workplace were observed. Subsequently, I focussed on the interpretation of industry and academic faculties on what attributes engineers would need to be effective against the changing world context in 2020. A multi-scale systems model viewing engineering competence holistically was then used to explain the salience of self-efficacy and self-perception. Different characteristics of self-concept were highlighted and these characteristics were linked to the stories/narratives clients use to validate the self.

Career Construction theory (CCT), the theory that underpins my study and its significance in 21st century career counselling were described and the four cornerstones of life structure, career adaptability, life themes and personality style were elucidated. Career counselling was defined and distinguished from vocational guidance and career education.

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<sup>8</sup> See Section 2.5, Professional development of engineers, p. 16.

Lastly, state-of-the-art career intervention which is likely to bring about change in the perception of self was discussed. An eight-step strategy to create life portraits and forge personal vision and mission statements was discussed and general principles were discussed to enable career counsellors to assist clients in crafting their life portraits. The chapter was concluded by a brief overview of the notions of employability, adaptability, emotional-social intelligence and lifelong learning as goals for career intervention.

## CHAPTER 3

### RESEARCH DESIGN AND METHODOLOGY

#### 3.1 INTRODUCTION

Chapter three describes and justifies the procedures that will be followed to answer the research questions in the study (Athanasou et al., 2012). The research paradigm, the methods that will be used, the participant involved, the instruments which will be used, the procedures that will be followed and how the findings will be analysed are discussed in this chapter.

#### 3.2 PARADIGMS

According to Nieuwenhuis (2010) a paradigm is ‘a set of assumptions or beliefs about aspects of reality which gives rise to a particular world-view’. Nieuwenhuis (2010) also indicates that a paradigm serves as an organising principle by which reality is interpreted. Paradigms comprise three lenses to explore research practice, (1) ontological assumptions which deal with the question of what is the truth, (2) epistemological assumptions which ask the question: how can we find or get to know the truth, and (3) methodological considerations dealing with methods of data collection and research instruments (Maree & Van der Westhuizen, 2009). These three lenses correspond to one another. The ontological and epistemological assumptions will be discussed in the next paragraphs. The methodology will be discussed under the section named ‘Research design’.

##### 3.2.1 Ontology (What is the truth)

The ontological assumptions regarding this research study is postmodern, narrative and qualitative bearing in mind that these terms are often used interchangeably (Maree, Ebersöhn & Biagione-Cerone, 2010).

##### 3.2.1.1 Postmodern

As ‘ontology’ refers to the nature or form of reality (Nieuwenhuis, 2010), this study subscribes to a postmodern approach toward reality and resists claims in modern science to objectivity, rationality, universal validity and certainty (Maree, 2004). A postmodern approach considers the relativity and diversity of knowledge, reality and truth. Postmodernists realise that truth depends on specific contexts and cannot be generalised. Postmodern researchers would hold an *emerging* world-view (Nieuwenhuis, 2010) realising that there is no absolute truth. Their view of the truth is shaped by experiences and interaction.

In career counselling the postmodern approach affirms the client as the sole expert on the self. Career counselling in the post-modern era is characterised by the move from the counsellor as the expert to a more collaborative approach (Maree et al., 2010) between counsellor and client. The sole dependence on test results in career counselling which omits personal meaning-making belongs to a traditional approach. Postmodern career counselling accentuates personal and clients' stories as opposed to objective assessments providing scores to fit clients into a 'normal' curve (Maree, 2004).

### **3.2.1.2 Narrative**

This study is rooted in a narrative approach toward conducting the research, collecting and analysing the data. The term narrative comes from the verb to narrate or 'to tell (as a story) in detail' (Creswell, 2008, p. 512). Creswell describes narratives as the 'focus on the studying of a single person through the collection of stories, reporting individual experiences, and discussing the meaning of those experiences for the individual'. Narrative is a literary (Creswell, 2008) and popular (Nieuwenhuis, 2010) form of qualitative research which focuses on the micro-analytic picture as opposed to broader pictures such as cultural norms and abstract theories.

Language plays a key role in narrative research. It provides the means required to share the self. Postmodern career counselling makes optimal use of conversations (Eloff, 2002). In career construction theory, Savickas (2011) remarks: 'we live inside language because language contains the self ...' (p. 16). He also indicates that the career practitioner needs to pay close attention to the language of the client. A client constitutes the self and in co-constructing a new self, the client needs new words to open new worlds for himself.

### **3.2.1.3 Qualitative**

This study will be conducted qualitatively. By embarking on a qualitative research study, the researcher attempts to collect rich descriptive data exploring a particular phenomenon or context with the intention of developing an understanding of what is being observed or studied (Nieuwenhuis, 2010). Qualitative research constructs meaning out of experiences, explores the 'why' questions in a study and focuses on in-depth information. Qualitative studies are idiographic (Creswell, 2008) implying concern with the uniqueness of each particular situation. In qualitative studies the researcher is the instrument through which the data is collected and analysed (Nieuwenhuis, 2010). In this study, I will aim to understand the behaviour and experiences of the participant from his view exploring the multiplicity and subjectivity (Rule & John, 2011) of his perceptions contributing to his sense of self.



### **3.2.2 Epistemological assumptions (How can we get to know the truth)**

#### **3.2.2.1 Interpretivist /constructivist**

In this study I will work from an interpretivist and social constructivist paradigm. Career construction theory emphasises interpretive and interpersonal processes which involve the understanding and interpreting of meanings revealed during interactions (Maree & Hansen, 2011). Researchers working in an interpretive/constructivist paradigm acknowledge that the subjective experiences of people are valid, multiple and socially constructed (Crous, 2011) and they believe they can understand the experiences of others in interaction with them by listening to how they make meaning of their lives in relation to others.

The philosophical roots of the narrative approach agree with social constructivism (Chen, 2007). As Savickas (2011) also emphasises, social constructivism is used in career construction theory as a meta-theory to re-conceptualise occupational tasks as processes with various possibilities in future.

### **3.3 RESEARCH DESIGN**

Nieuwenhuis (2010) defines a research design as a plan and strategy moving from the underlying philosophical assumptions to specify the selection of respondents, the data gathering techniques to be used and the data analysis to be done. The proposed study is interpretive and explorative in nature and the research design for the enquiry is a case study. A multi-method study of a young engineer's response to assessment and interventions to explore possible development in the sense of self will be conducted.

#### **3.3.1 Case study**

A case study is an in-depth exploration of a bounded system (which can be an activity, event, process, or an individual) based on extensive data collection (Creswell, 2008). In the proposed study the development of the sense of self of an individual will be explored through different assessments and interventions on three levels as proposed in the Career Construction Theory (Savickas, 2005) to attempt to gather sufficient data to ensure rich and meaningful outcomes.

This study can be described as an intrinsic and instrumental case study. 'Intrinsic' refers to the researcher's genuine interest in the case with the intent to understand the case better because of a particular trait (Baxter & Jack, 2008). This case study is of particular interest to me, because the participant will be a young engineer searching to explore himself to align his sense of self to his profession. 'Instrumental' refers to the fact that the study involves a process in which a narrative approach will be used to try and accomplish change in the sense of self of a young engineer. Apart



from the in-depth view on/study of the participant, the method of counselling/intervention and its influence is also explored. The participant is instrumental in determining the possible influence of the narrative approach on his sense of self.

The ‘unit of analysis’ (in this study the participating individual) is a critical factor to develop a holistic and comprehensive understanding (Nieuwenhuis, 2010) of the phenomenon explored. Merriam (2002) asserts that the character of a case study is determined by the unit of analysis. In working with engineering students, I perceive them often to be reluctant to explore subjective experiences due to their limited exposure to assert feelings within their work/study environment. With this in mind the proposed method of enquiry had to be considered sensitively to ensure comprehensive outcomes.

### **3.3.2 Multi-method approach**

I will use a multi-method research design for this study. A multi-method or mixed method research design is a procedure for collecting and analysing both quantitative and qualitative research methods in a single study to explore a research problem (Creswell, 2008). Mingers (2001, 2003) highlights some advantages to using a multi-method approach in research by stating that a multi-method approach provides a more comprehensive understanding, validates interpretations through triangulation, broadens the enquiry as more aspects are included, adds analytical power to the research in using quantitative and qualitative methods, and discovers and confirms unexpected outcomes. I find the idea of exploration (linked to a qualitative approach) and confirmation (linked to a quantitative approach) as described by Teddlie & Tashakkori (2003) thought-provoking, although in the proposed study, exploration and confirmation will be integrated by using both qualitative and quantitative approaches.

## **3.4 SAMPLING**

Purposive sampling (Nieuwenhuis, 2010) will be used to select a participant. This kind of sampling is done with a specific purpose in mind, namely to provide a better understanding of the central phenomenon (Creswell, 2008) of the study. The study explores the use of a narrative approach to develop the sense of self of a young engineer. The participant will be selected based on certain characteristics/criteria. Selection criteria were the following:

- A young engineer working in industry
- The young engineer needs to be able to provide rich data for the study
- The young engineer had to have enquiries/uncertainties about his future career
- The young engineer needs to be willing to and be able to make time for the data collection and intervention in his work schedule

### 3.5 DATA COLLECTION

The process to collect data and analyse results is characterised by the following symbols: QUAL + Quan. In this study the data gathering will give priority to qualitative data (QUAL) emphasising the exploration and development of the sense of self of the participant, but will also include quantitative data (Quan) to support the process and findings. The data collection and analysis of the qualitative and quantitative data will be done simultaneously. Therefore a “+” is used to illustrate the fact that both data sets will be utilised concurrently. The reason for using a multi-method approach in the study is to triangulate, to explore and to explain (Creswell, 2008) the outcomes. A key strength of the case study method is its scope to use multiple sources and techniques in the data gathering process (Nieuwenhuis, 2010). Yin (1994) mentions the different possible data collection instruments that can be included in case studies to collect data. These instruments include surveys, interviews, observation and even the collection of artefacts.

In the next section I disclose which data collection techniques will be used and I provide a framework to explain the reasons for the specific instruments. The data gathering strategy for this study is structured in such a way that it assesses and intervenes according to the Career Construction Theory as described by Hartung (2011) covering the differential, developmental and dynamic perspectives. The planned psychometric instruments to be used in the study are described in the following paragraphs.

#### 3.5.1 Differential perspective

##### 3.5.1.1 *Myers-Briggs Type Inventory (MBTI) (Briggs and Briggs Myers, 1994).*

The *MBTI* measures personality type and was standardised within the South African population. The *MBTI* is one of the most widely used instruments for understanding normal personality differences (Briggs Meyers, 1998). Basic patterns in human functioning are described as a result of where people prefer to focus their attention and get energy (Extraversion or Introversion), the way they prefer to take in information (Sensing of Intuition), the way they prefer to make decisions (Thinking or Feeling), and according to which process they prefer to orient themselves to the external world (Judging of Perceiving).

##### 3.5.1.2 *Self-Directed Search (SDS) (Gevers, Du Toit & Harilall, 1994)*

The *SDS* is an occupational interest questionnaire developed in the United States of America by J. L. Holland in 1970. The *SDS* categorises people and occupations in six categories. People and work environments are matched according to their traits. These six categories are Realistic, Investigative, Artistic, Social, Enterprising and Conventional. The *SDS* questionnaire determines the degree to which a person corresponds with each of the six types. A three letter code

is obtained as indication of the degree of correspondence with the six types. The occupations people tend to follow are also divided into the same six categories and are known as the environmental types. Individuals usually prefer and environmental types that suit their personality types (Gevers, Du Toit & Harilall, 1997).

### **3.5.2 Developmental perspective**

#### **3.5.2.1 *Emotional Quotient Inventory (EQ-i)* (Bar-On, 2004).**

The *EQ-i* is a self-report questionnaire on emotional and social functioning at a given point in time. It was tested against South African norm groups. Emotional intelligence is defined as the manner in which people understand themselves and others, as well as their ability to form relationships with others and to adapt to their immediate surroundings (Maree & Bester, 2010).

#### **3.5.2.2 *Career Adapt-Adaptabilities Inventory (CAAS)* (Savickas & Porfeli, 2012)**

The *CAAS* assesses psychosocial resources for managing occupational transitions, developmental tasks and work traumas. Mark Savickas (2005) identified four dimensions of career adaptability to assist workers to respond, and adapt to the new world of work (Galvin & Berger, 2013). The adapt-abilities are Concern, Control, Curiosity and Confidence. *Concern* measures the individual's involvement in planning and thinking about their career. *Career control* represents how much responsibility individuals take to manage and control their careers. *Curiosity* measures how much individuals explore the world of work in general. *Career confidence* measures how confident an individual feel to make well-informed career decisions. Confident individuals would believe in their ability to overcome challenges, and make sound decisions by collecting and analysing sources of information.

#### **3.5.2.3 *Career genogram* (Chope & Van Velsor, 2010; Di Fabio, 2010)**

The genogram is a narrative technique to assist clients in telling their stories and to help identify their life career themes in the career counselling process. The genogram was developed by Bowen in the 1970's to facilitate intergenerational family influences over three generations. De Fabio (2010) cloned the term Career Construction Genogram (CCG) to assist narrative interventions of life design and career construction.

### **3.5.3 Dynamic perspective**

The following qualitative techniques will be used in the study.

#### **3.5.3.1 Collage (Fritz & Beekman, 2007)**

A *collage* is a form of pictorial storytelling (Fritz & Beekman, 2007) where the client is free to select pictures, photographs and written words and/or slogans to illustrate the topic. As the client discusses the contents of the *collage* life stories are being told which has relevance to the client.

#### **3.5.3.2 Career Interest Profile (CIP) (Maree, 2010)**

The Career Interest Profile (CIP) combines qualitative and quantitative approaches and has the goal to stimulate clients to narrate and reflect on their career and life stories (Maree, 2013). This strategy enables the counsellor to read their stories back to clients for them to authorise/de-authorise or approve/disapprove (Maree, 2013). The ultimate aim is to help clients to start moving (acting or take agency) from a passive state accepting what the counsellor says to an active and dynamic progressive state (Maree, 2013).

#### **3.5.3.3 Life chapters (Cochran, 1997)**

In the life chapters technique the participant is asked to think of his life as an autobiography. He gets the opportunity to sum up his life in episodes that is of significance to the client. The client needs to select a title and heading for each chapter.

#### **3.5.3.4 Early Recollections Technique (ERT) (Maree, 2007)**

In his Career Construction Theory, Mark Savickas (2009) combines the psychodynamic approach with the differential and developmental approaches (as discussed previously). The early recollections technique (ERT) facilitates the psychodynamic approach in the career construction theory. In the psychodynamic perspective earliest memories are considered as probably the most powerful mechanism to discover and untangle traumatic events and its after-effects (Maree, 2011) in a person's life. According to Savickas (2009) the unconscious deliberately pick out memories that are considered useful to a client at a given point in time. Different memories would probably emerge at other stages in the lifespan of an individual. The emerging stories from early childhood situations help counsellors to identify current pre-occupations. This technique is meaningful and effective to assist clients to 'actively master what they have passively suffered' (Maree, 2013).

#### **3.5.3.5 Career Construction Interview (CCI) (Hartung, 2011)**

The career construction interview (also named 'career style interview' (Savickas, 2009) or 'career story interview' (Savickas, 2010) is used for clients to better understand themselves and does not primarily focus on career or study choice. The interview reveals subjective life-career

themes (Hartung, 2011) as a response to a series of questions which provokes clients to tell stories that define who they are and who they desire to become. Life-career themes clarify self-concepts and help clients to contemplate on how they can use work to be authentic and then how they can contribute to their community and larger society.

### **3.5.3.6 Informal interviews**

Informal interviews will be form part of all sessions to put the participant at ease and to establish a trust relationship.

### **3.5.3.7 Reflective feedback notes**

After each session the participant will be requested to write brief reflective notes (minimum of 50 words) capturing his experience of the session. This reflection will be e-mailed before the next session commences. The participant's reflective notes will contribute to the richness of data to monitor the growth and self-development of the young engineer through meta-reflection (reflecting on own reflections) (Maree, 2012).

## **3.5.4 Data collection plan**

In the study, the collection and analysis of qualitative and quantitative data will be conducted concurrently as mentioned previously (hence the “+”). Although a specific sequence is suggested in the way the data gathering plan is proposed, the emphasis is not on the sequence, but rather on an attempt to gather rich and in-depth data to inform the enquiry (see **Table 3.1**). Assessment of the sense of self and interventions to develop the sense of self are intertwined in the study as feedback and discussion will take place throughout the sessions. Maree et al. (2010) report on the benefit of such a simultaneous approach as it allows the researcher to deal with obstacles immediately as opposed to first analysing the findings and then implementing the intervention afterwards.

The data collection opportunities consist of face-to-face meetings with the participant. I plan to meet with the proposed participant in eight to nine sessions for one to three hours per session. The exact number of sessions will depend on the work pace, needs and understanding of the participant. The duration of each session will depend on the specific activities for a particular session. All sessions will be audio recorded. The proposed sessions are defined in the **Table 3.1**.

**Table 3.1:** Data collection plan

Sessions	Planned activity/technique	Purpose
<b>1</b>	<i>Introductory session:</i> Exploration of current sense of self <ol style="list-style-type: none"> <li>1. Collage</li> <li>2. Semi-structured interview</li> <li>3. Homework: Life story in chapters</li> </ol>	Explore the current sense of self qualitatively through discourse.
Brief reflective notes on <i>How do I see myself?</i>		
<b>2</b>	<i>Administer formal assessments</i> <ol style="list-style-type: none"> <li>1. CAAS</li> <li>2. MBTI</li> <li>3. SDS</li> <li>4. CIP</li> </ol>	Describe career adaptability, study methods, personality and interest quantitatively searching for themes and possible patterns to further explore the sense of self.
Brief reflective notes on How did I experience the previous session?		
<b>3</b>	<i>Personality</i> <ol style="list-style-type: none"> <li>1. Feedback and discussion on MBTI</li> </ol>	Exploring outcomes and constructs of personality assessment qualitatively through discussions with the participant.
Brief reflective notes on What did I learn about my personality?		
<b>4</b>	<i>Interest</i> <ol style="list-style-type: none"> <li>1. Feedback on SDS</li> <li>2. Discussion on CIP</li> <li>3. Homework: Explore family vocation</li> </ol>	Verifying occupational themes and career categories with the participant.  Exploring emerging themes reflecting on the narrative part of the CIP.
Brief reflective notes on What did I learn about myself that I did not know before?		
<b>5</b>	<i>Context</i> <ol style="list-style-type: none"> <li>1. Career-o-gram</li> <li>2. Homework: EQ-i online</li> </ol>	Visual construction of the genogram to explore the influence and relationships with family members on the sense of self
Brief reflective notes on How was I influenced by family regarding my perception of self?		
<b>6</b>	<i>Emotional and social intelligence</i> <ol style="list-style-type: none"> <li>1. Feedback on EQ-i</li> </ol>	Exploring intrapersonal, interpersonal, adaptability, stress management and general mood contributing to the sense of self.  Defining areas for possible development.
Brief reflective notes on What did I learn about myself through the session on emotional and social intelligence?		

Sessions	Planned activity/technique	Purpose
7	<i>Life story</i> 1. Career Construction Interview and Early recollections technique	Defining significant events informing the sense of self. Narrating the life story.
Brief reflective notes on <i>Future aspirations</i>		
8	<i>Reflective discussion on sense of self</i> 1. Collage or self-chosen visual representation of emerging self	Redefining self
Brief, open-ended reflective notes		
9	<i>Last session</i> Open topic: participant can choose the topic	Termination of sessions

The why, what, how and who for collecting data in this study were selected with the research questions in mind – utilising the narrative approach to develop the sense of self, exploring the sense of self of the participant and to try and determine the influence of the narrative approach on the sense of self through meta-reflection. The plan for data analysis will be described in the next section.

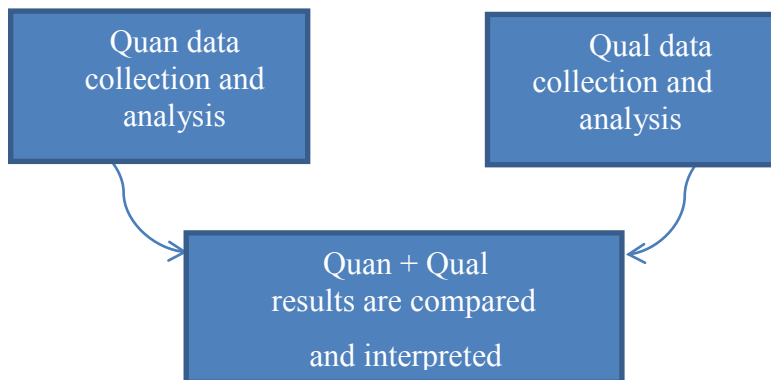
### 3.6 DATA ANALYSIS AND INTERPRETATION

The reason for using a multi-method approach is to converge and match the data collected through assessments and narrative methods in order to address the research questions in a meaningful way. This study is interpretive in nature meaning that the data will contain multiple realities (Maree & Van der Westhuizen, 2009) to explore. For this study a triangulated analysis design will be chosen to analyse data.

#### 3.6.1 Triangulated analysis design

The triangulated analysis design (Creswell, 2008; Ivankova, Creswell, & Plano Clark, 2007) is best suited when ‘both types of data are collected simultaneously about the same phenomenon in order to compare and contrast the different findings to produce validated conclusions’ (Ivankova et al., 2007, p. 266). The diagram in **Figure 3.1** graphically depicts the concept. The quantitative and qualitative data will be collected and analysed simultaneously to investigate emerging themes. Then both sets of findings will be compared to explore themes

emerging from both sets of data. This method will facilitate well-substantiated and comprehensive conclusions (Ivankova et al., 2007).



**Figure 3.1:** Triangulated analysis design (adapted from Ivankova et al., 2007).

In the following paragraphs I intend to explain how the different data sets will be analysed respectively.

### 3.6.2 Qualitative data analysis

#### 3.6.2.1 Inductive data analysis

Inductive data analysis will be used to analyse and interpret the qualitative data. Inductive analysis could identify and disclose various realities which are potentially present (Maree & Van der Westhuizen, 2009) in interpretive research such as this case study. Inductive refers to the process of starting with detailed data progressing to general themes. The process of data analysis as described by Creswell (2003; 2008) will be followed in order to interpret the narrative data.

In this study I will (a) first prepare and organise the data by transcribing all field notes in a standard format, including font size, margin added to each page with clear differentiation between participant answers and interviewer comments. I will then (b) read through the data several times familiarising myself with the content and I will make notes. Next I will (c) identify and define main themes or categories which are derived from the research aim namely the development of the sense of self through the use of the narrative approach. I will next (d) derive text segments identifying actual phrases or meaning units often used by the participant by reading through the data multiple times. I will then (e) categorise the phrases or units of meaning under the identified themes. In each main theme I will (f) identify sub-themes which relate to the main themes contributing to a deeper understanding and new insights. Conflicting sub-themes will also be considered to improve understanding of the participant's representations.



### **3.6.3 Quantitative data analysis**

The quantitative data analysis will be conducted according to the prescribed standardised approaches of the questionnaires respectively. The different constructs and specific results of the participant's generated profiles/reports will be used to identify, define and describe themes related to the sense of self of the participant. These categories and themes will be compared to the categories and themes derived from the narrative data to see whether the data correlates positively (Maree & Van der Westhuizen, 2009).

## **3.7 QUALITY ASSURANCE**

To enhance and increase the reliability (Maree & Van der Westhuizen, 2009) of this research project, the following strategies will be followed (compiled from Creswell, 2003; McMillan & Schumacher, 1997).

### **3.7.1 Credibility**

Triangulation and crystallisation will be used to cross-validate research results in this study. Triangulation will be achieved by collecting many types of evidence including numerous opportunities for observations which will be done over nine different meetings with the participant. The data will be coded independently by an external coder to ensure that the identified themes and patterns are a truthful representation of the data. Crystallisation will be achieved by focusing on complex themes and patterns that emerged during the data collection phase to create a better understanding of the data.

### **3.7.2 Dependability**

To guarantee the dependability of the research outcomes, the data will be coded by an external coder who will receive verbatim transcriptions of the data.

### **3.7.3 Conformability**

Comprehensive documentation of the data, methods and decisions made during the study will be recorded in a meticulous way to adhere to the strategy of conformability.

### **3.7.4 Transferability**

Observations during the data collection phase will be documented in a research diary. Detailed descriptions of the setting will be given to provide insight in the applicability of the data in other settings.

I take cognisance of Creswell's (2008) alerting of the personal impact of the researcher describing the situation and themes in an interpretive research design. I plan to verify with the participant on the emerging themes throughout the process by working together (co-constructing)

to develop the subjective self of the participant. These checks will be done by providing a verbal summary after every interview session allowing the participant to correct errors or challenge interpretations. The meta-reflective notes will also provide an opportunity for the participant to authorise the outcomes. I will also discuss the results gained throughout the study with my supervisor.

### **3.8 ETHICAL CONSIDERATIONS**

The essential purpose of research ethics is the protection of the welfare of research participants but it also extends to the quality (the how) when conducting research (Wassenaar, 2006). I agree to endorse the eight ethical guidelines by Emanuel, Wendler, Killen & Grady (2004) as described in the following paragraphs concerning collaborative partnership, social value, scientific validity, selection of participants, the risk/benefit ratio, ethical review, informed consent, and on-going respect for participants and study communities when conducting this study.

#### **3.8.1 Collaborative partnership**

Collaborative partnership serves to ensure that the research conducted is developed to address the need/enquiry of the participant and not only to benefit the researcher (Emanuel et al., 2004). My role in this study is that of a researcher and not as a psychologist. While being fully aware of the possibility of the emergence of potential negative thoughts and attitudes, if it seems necessary, I will refer the participant to a colleague who works for the Student Support services-unit on the UP campus who will be readily available for individual counselling if needed.

#### **3.8.2 Social value**

Social value entails that the problem being researched and the interventions planned in the study, need to be of worth/value to the participant and/or to society (Wassenaar, 2006). The targeted participant in this study (as described in the section on Sampling) will benefit by the interventions in (hopefully) experiencing development and growth in his self-perception through the data collection plan and interventions.

#### **3.8.3 Scientific validity**

The research design, methodology and data analysis should be rigorous, justifiable and feasible (Wassenaar, 2006) to arrive at reliable and valid outcomes. By applying the planned research design, carrying out the proposed methodology in a comprehensive way, analysing the data meticulously and being guided by my supervisor and other research associates should lead to valid outcomes for the research enquiry.

### **3.8.4 Fair selection of participants**

The selection of the participant in this study is ethically done as it is based on the outside enquiry of a young engineer who is working in industry for the first time this year. The selection criteria to fulfil the purpose of the enquiry are described in the section on Sampling.

### **3.8.5 Risk/benefit ratio**

I am committed to prevent any possible harm to the participant on an emotional, physical or psychological level. The student needs to compromise some of his time to the planned data collection and intervention sessions and should not allow his work and the company where he is employed to suffer as a result. He will hopefully gain personal growth through these interventions to make the time spent worth his while.

### **3.8.6 Independent ethical review**

The Ethics Committee of the Faculty of Education at the University of Pretoria to which the proposal for this study was submitted provided ethical clearance to the research project before the data collection phase started.

### **3.8.7 Informed consent**

The participant will be asked to give his written permission to participate in the research study after being informed of the purpose and consequences of participation. To acquire informed consent I will discuss the informed consent letter with the young engineer explaining procedures regarding recording of the sessions, assessments that will be done, and possible advantages and disadvantages of participation (see **ANNEXURE A**). The engineer, who is of legal age and therefore eligible to give consent, will be informed about his right to withdraw from the project at any stage should he wish to discontinue, with no consequences.

### **3.8.8 On-going respect for participants and study community**

This principle necessitates that participants will be treated with respect during interventions and that all individual information will be kept confidential (Easter, Davis, & Henderson, 2004). During the course of the study I undertake to protect the identity of the participant by keeping results/profiles of assessments in a safe place. No information which may lead to the identification of the individual in any form of reporting will be divulged and recordings will be destroyed once the study is completed. A pseudonym will be used in the report. The data will be discussed with my supervisor and research associates but I commit to doing that with respect, sympathy and sincerity (Leedy & Ormrod, 2005). During the entire process I undertake to follow the ethical guidelines by trying to serve the best interest of the participant at all times.

### 3.9 SUMMARY

In this chapter I discussed the research procedure that will be followed in my study. The ontological paradigm which is postmodern, narrative and qualitative is discussed firstly. An interpretive/constructivist epistemology which will guide the research was then discussed. The research design (a multiple-method case study) is then described. Thereafter the process of data collection and data analysis was described followed by quality assurances techniques and ethical considerations which will guide this study. In the following chapter (Chapter 4) the results of the study will be discussed.

## **CHAPTER 4**

### **RESULTS**

#### **4.1 INTRODUCTION**

This chapter represents the main findings of the narrative exploration of the sense of self of a young engineer. I start by giving an overview of the data analysis methods used to analyse the data followed by the background information of the participant. A brief overview of the process followed throughout the sessions is then discussed. Each session is described and the themes that emerged from every assessment are listed. A summary and overview of all the themes from the data sources are given. Finally a section on literature control is presented. The next paragraph is an overview on the methods of data analysis.

#### **4.2 DATA ANALYSIS METHODS**

A multi-method approach which refers to using both qualitative and quantitative methods in the same study to explore the research problem (Creswell, 2008) was used to collect and analyse the data. The aim of using the multi-method approach was to explore multiple realities (Maree & Van der Westhuizen, 2009) contained in the data. A triangulated analysis design was employed by collecting both data types (qualitative and quantitative data) simultaneously to compare the findings and produce validated results. The data collection and analysis were conducted concurrently. Qualitative data was analysed inductively by starting on a detailed level progressing to more general themes. The data was analysed as described by Creswell (2008). The quantitative data was analysed according to the prescribed method of each questionnaire. Then themes related to the sense of self of the participant as according to the quantitative data were compared with themes identified through the narrative data. Relevant background information of the participant will next be discussed.

#### **4.3 BACKGROUND INFORMATION OF THE PARTICIPANT**

The participant is a twenty five year old Caucasian male (hereafter called, George). His home language is Afrikaans. George grew up as the only child of parents who were married for fifteen years before he was born. The family stayed in an industrial town in the far north of the Free State province in South Africa. Both his parents are very supportive towards him and George mentioned that he does not keep many secrets from them. George matriculated at the local high school in his home town with distinctions in Mathematics and Natural Sciences. Apart from academic merit he also excelled in swimming by winning the South African 200 meter and 400

meter free style championships in his matric year. George was deputy head boy in his school in grade 12.

George is a first generation tertiary graduate in Chemical Engineering at the University of Pretoria. George studied with a bursary from his current company. During his six years of engineering studies George stayed in a male residence. In his first two years at university he experienced challenges fitting in at the residence and to settle into the academic programme. He did not pass some of his subjects, wasn't motivated and had bad social habits which prevented him from performing. At the beginning of his third year George decided to approach a life coach and reported on having learnt much about life in general from this professional. In his final year George was part of the residence's house committee responsible for first year students.

George recently started working at a large petrochemical company in Mpumalanga. He is overwhelmed with the large structure of the company and is uncertain where he fits in. George was part of a co-horde of engineering graduates whom the company did not know where to place. George landed up working between technicians doing physical work on the company's plant but was just grateful to have a job. George mentions that he experienced some tension in his relationship with his girlfriend because of not being able to foresee the stress involved in working at a company as opposed to being a student at university.

George mentioned some disillusionment with fellow employees who often deliberately withhold necessary information for their own personal gain to earn a better work position. He remarks on not wanting to befriend his manager for a better position, because he prefers earning his standing through hard work and competence. George wants to make himself indispensable in an honest way but is not sure how.

George mentions some difficulty in social adaptation to the new town. His girlfriend and friends from university reside in Gauteng. He admits to feeling left out and is jealous of them meeting without him. He could not yet manage to make new friends in the new town. George feels somewhat frustrated in the smaller town compared to urban life which he finds more stimulating.

He also wants to position himself best to reach his full potential within the company and considers possibilities of studying further on a part-time basis. George is uncertain about when to start his studies and he is also indefinite about whether he should further his academic/technical capabilities or rather to further his studies in business sciences. George has ambition and wants to equip himself to avoid disappointment in ten years' time for neglecting valuable opportunities. He is doubtful whether his degree in chemical engineering is sufficient. *'Ek het nou die graad en als, maar is dit genoeg? ... Moet ek meer, moet ek iets anders?'* [I have the degree and all now, but is it enough? ... Should I do more, should I do something different?] He also wants to be able to

change jobs in future when needs be and therefore wants to be marketable and highly employable in his field.

George met the requirements as a participant for my study and agreed to participate after being briefed on the scope to explore his sense of self to better equip him to make decisions for his future career. The following section provides a summary of the themes identified in the study.

#### **4.4 IDENTIFIED THEMES**

The themes were inductively analysed and categorised according to three main perspectives on which Career Construction Theory is based (Savickas, 2005). I therefore first worked inductively and then deductively. Themes related to the differential perspective are discussed firstly followed by the developmental and dynamic perspectives. The next section covers practical and general remarks pertaining to the data collection process.

#### **4.5 DISCUSSION OF THE PROCESS TO EXPLORE THE SENSE OF SELF OF THE PARTICIPANT**

The participant resides in a town in Mpumalanga which is a 180 km ( $\pm 2$  hours) drive from the University of Pretoria where the sessions were conducted. Because George works during the week all sessions had to be conducted after hours and over weekends to fit his work schedule. In some instances two sessions had to be conducted on one day due to George's working schedule at the plant. The periods between the sessions differed in time length and dates could not be determined up front due to work constraints. George preferred to have the sessions in Pretoria because he combined the sessions with visits to his friends and relatives in Pretoria.

The data was analysed and interpreted after each session. The sessions did not realise exactly as was outlined in the data collection plan. The reason was that certain sessions took longer than projected and certain activities then had to be postponed to a next session. George was given the opportunity to give a short written feedback after each session which was also used to support evidence.

I generally found it easy to communicate with George as he is responsive and seems comfortable in one-on-one discussions talking about himself. It was evident that it wasn't his first experience in a counselling situation. George easily shared information about his background, days at school, university life and the current frustrations he experienced in adapting to his new job and the move he had to make away from Pretoria to a new town.

The sessions were conducted over a time period of five months. In these months certain changes occurred in the company which affected George directly. Halfway through the sessions he was transferred from being a 'process controller' in a technical division to an engineering division

where he holds the position of ‘candidate process engineer’. Changing divisions and positions had a positive effect on George. He did not have to work shifts anymore and for the first time George had the opportunity to work among other engineers. The engineers are all female and he positively commented on their willingness to accommodate him in their team. They are willing to provide any help George needed. He also received a new project for which he would be individually responsible. George mentioned his interest in further studies to his line manager who then offered to support a request that the company pays for his further education.

The different sessions will be discussed in the next section. The sessions and assessments were conducted in the following order:

- Session 1: Introductory interview
- Session 2: *Collage*
- Session 3: *Self Directed Search (SDS)* (Gevers, Du Toit & Harilall, 1994) and career genogram (Chope & Van Velsor, 2010; Di Fabio, 2010).
- Session 4: *Myers Briggs Type Indicator (MBTI)* (Briggs and Briggs Myers, 1994)
- Session 5: *Emotional Intelligence Inventory (EQ-i)* (Bar-On, 2004). and *Career Adapt-Adaptabilities Scale (CAAS)* (Savickas & Porfeli, 2012)
- Session 6: *Career Interest Profile (CIP)* (Maree, 2010) and Life chapters (Cochran, 1997)
- Session 7: Early recollections technique (ERT) (Maree, 2007)
- Session 8: Career Construction Interview (CCI) (Hartung, 2011)
- Session 9: Concluding session

The assessments are mentioned a number of times in this chapter and due to limited space the references will not be included each time the assessments are mentioned. The assessments and their purpose are discussed in Chapter 3. The assessments used in each particular session and the themes that emerged in every session will now be discussed consecutively.

#### 4.6 SESSION 1: INTRODUCTORY DISCUSSION

The first session evolved as an extensive discussion on the reason why George asked the assistance of a career counsellor in exploring his future career. As briefly mentioned in the background information, George is in the process of adapting from being a full time student to being a full time employee of a large engineering company. He started working in the plant as a technician doing hands-on process controlling work and struggles with the question of ‘where do I fit in?’ In his own words ‘... *die [maatskappy-] struktuur is baie groot en ek weet nie waar ek tot die beste van my vermoë sal inpas nie. Ek weet nie of ek nie die werk net ‘n ‘go’ moet gee vir vier*



of vyf jaar en kyk waar kom ek uit nie' [... the (company name) structure is very big and I don't know where I will fit in to the best of my abilities. I don't know whether I should just give the job a go for four to five years and then see where I would end up].

Secondly, George wants to study further '*Ek weet nie wat ek verder moet swot nie. Ek weet nie wat ek moet swot as ek verder wil swot nie*' [I don't know what I should study further. I don't know what I should study when I decide to study further] and doubts whether his engineering degree is sufficient to fulfil his ambitions '*Ek het nou die graad en als, maar is dit genoeg? ... moet ek meer, moet ek iets anders?*' [I have the degree and all now, but is it enough? ... should I do more, should I do something else?] He is indecisive on when to start further studies but also what studies to pursue. He wants to be sufficiently equipped to keep his options open to make the career decisions putting him in the best position for his future. '*Ek wil net nie na 10 jaar terugkyk en sê as ek dalk beter toegerus was sou ek kon aansoek doen vir dit of vir dat nie ... ek wil die moontlikheid hê om as ek wil skuif dat ek kan skuif ...*' [I just don't want to look back after 10 years and say that I could have applied for this or that if I've been better qualified ... I want to have options to move if I want to move ...].

Thirdly, George is not clear how he sees his own career path in future. He perceived that some people befriend their managers to earn their position in that way but he would like to be respected for the quality of work he delivers '*daar [is]mense wat eerder inligting vir hulleself sal hou om beter te lyk by hierdie ou [dis net] 'alles... vir jouself ...*' [There are people who keep information back to make themselves look better ... it is all ... just for themselves]. George also comments on a friend of his who exactly knows where he wants to navigate his career path to but he himself is not sure where he should be heading '*Ek sal maar sien ... ek weet nog nie lekker nie ... waar en wat nie...*' [I will see ... I don't know that well yet ... where and what?].

Lastly, George sometimes suffers from a lack of confidence among for example, engineers who have more work experience than him. '*... as ek ongemaklik is dan sukkel ek en kom ek baie skaam voor ... Soos as ek saam met 'n klomp ingenieurs gaan kuier wat al drie tot vier jaar daar werk, gaan ek nou nie heeltemal my sê sê nie*' [... if I am uncomfortable then I struggle and I appear to be very shy ... like when I go out with a bunch of engineers who have three to four years of working experience, it is difficult to be myself and to give my opinions].

I proposed the planned process to explore his sense of self in order to be able to address the above concerns and George agreed to participate. I shared the essence of Mark Savickas' Career Construction Theory with George for him to grasp the idea or framework of the process. He seemed interested and keen and wanted to start straight away. It was clear that George experienced

problems with adapting to a new environment. He found himself in a similar situation when he moved out of his home to become a first year in a university residence after he matriculated.

#### 4.6.1 Identified themes

The following categories, themes and sub-themes were identified in the introductory session. The sub-themes are colour-coded according to the category and theme as presented in the summary of the data analysis.

**Table 4.1:** Identified themes from the introductory interview

Categories	Themes	Subthemes	Sub-subthemes	Intro interview
Differential facets	Abilities	Chemical engineer		X
Differential facets	Abilities	Swimming champion		X
Differential facets	Abilities	Leader	Leadership positions	X
Differential facets	Abilities	People skills	Successful with technicians	Xxxx
Differential facets	Family background	Only child		X
Differential facets	Family background	Supportive parents		X
Differential facets	Interests	Business		X
Differential facets	Interests	Cooking		X
Differential facets	Personal traits	Achiever	Sports, employee	Xx
Differential facets	Personal traits	Achiever	Important to win	X
Differential facets	Personal traits	Emotional dependency	Self-destructive	X
Differential perspective	Personal traits	Emotional dependency	Needs loyalty from friends	X
Differential facets	Personal traits	Not rigid/flexible	Easy going, can adapt to social situations, fun to be with	X
Differential facets	Personal traits	Resilient	Academic studies	X
Differential facets	Personal traits	Social	Hospitable	X
Differential facets	Values	Ethical & spiritual principles		X
Differential facets	Values	Values achievements		X

Categories	Themes	Subthemes	Sub-subthemes	Intro interview
Differential facets	Values	Values money		X
Differential facets	Values	Values relationships		X
Differential facets	Values	Ethical principles	Wants to do what it right	X
Developmental facets	Adaptive accomplishment	Career path	Concern	Xx
Developmental facets	Adaptive accomplishment	Fitting in	New town, First year university	Xxx
Developmental facets	Adaptive accomplishment	Further Studies	What, When	X
Developmental facets	Adaptive accomplishment	Relationships	Work stress impact on relationship with girlfriend, work has psychological impact	Xx
Developmental facets	Adaptive accomplishment	Relationships	Stress with girlfriend because of work	X
Developmental facets	Adaptive accomplishment	Relationships	Away from friends	X
Developmental facets	Adaptive accomplishment	Work content	Not stimulating enough	Xx
Developmental facets	Adaptive accomplishment	Work content	Doesn't like office, admin jobs	X
Developmental facets	Adaptive accomplishment	Work role	Concern	X
Developmental facets	Challenges	Academic work	Doubts whether degree is sufficient, doubts study choice	X
Developmental facets	Challenges	Academic work	Struggled at university	X
Developmental facets	Challenges	Lack of confidence	Uncomfortable with experienced engineers	X
Developmental facets	Coping Mechanisms	Counselling	Career counsellor	X
Developmental facets	Coping mechanisms	Counselling	Life-coach	X
Dynamic facets	Aspirations	Financial freedom		X
Dynamic facets	Aspirations	Want to be technically strong/specialist to distinguish self		Xx
Dynamic facets	Aspirations	Wants to be very confident in his job		Xx
Dynamic facets	Pre-occupations	Failure, fall	Academically	X
Dynamic facets	Work setting	Hands-on		X

Categories	Themes	Subthemes	Sub-subthemes	Intro interview
Dynamic facets	Script	Personal development		Xx
Dynamic facets	Self-advice	People		X

#### 4.7 SESSION 2: *COLLAGE* (FRITZ & BEEKMAN, 2007)

The second session was taken up by George's compilation of a *collage* of his current sense of self. The *collage* was used as the first assessment with the purpose to build rapport and to get to know George better. He seemed relaxed during the discussions and shared much about his personal interests, hobbies and leisure time. The *collage* can be viewed in **ANNEXURE B**.

The topic of the collage was "Who am I?" George had to identify photographs and pictures from magazines to describe how he currently sees himself. The activity directed the discussion meaningfully although it seemed somewhat superficial at first. George's comments in his reflection on the session were as follows:

'I enjoyed this session a lot. It was very interesting to try and find pictures to match the picture of what I have in my mind of myself. At the beginning I thought that it would be easy and a fast task to do, but I realized that it isn't always easy to get something that fully describes you. The explanation session also helped, describing why I chose a certain picture and *hearing myself* saying it just cemented that picture into my mind. I learned a few things from that exercise'.

##### 4.7.1 Identified themes

The following categories, themes and sub-themes were identified while administering the *collage* as a narrative technique. The sub-themes are colour-coded according to the category and theme as presented in the summary of the data analysis.

**Table 4.2:** Identified themes from the *collage*

Category	Themes	Subthemes	Sub-subthemes	Collage
Differential facets	Abilities	Chemical/process engineer		Xx
Differential facets	Abilities	Swimming champion		X
Differential facets	Abilities	Leader	Leadership positions	X
Differential facets	Abilities	People skills	Successful with technicians	X
Differential facets	Abilities	Problem solver		Xx
Differential facets	Family background	Supportive parents		X
Differential facets	Interests	Business		X
Differential facets	Interests	Cooking		X
Differential facets	Interests	Outdoors, adventure sports, photography, travel in Africa		Xxx
Differential facets	Personal traits	Achiever	Sports, employee	X
Differential facets	Personal traits	Emotional dependency	Needs loyalty from friends	X
Differential facets	Personal traits	Not rigid/flexible	Easy going, can adapt to social situations, fun to be with	X
Differential facets	Personal traits	Social	Hospitable	Xx
Differential facets	Values	Ethical & spiritual principles		X
Differential facets	Values	Values relationships		X
Differential facets	Values	Ethical principles	Wants to do what it right	X
Developmental facets	Adaptive accomplishment	Career path	Concern	X

#### 4.8 SESSION 3: CAREER GENOGRAM (CHOPE & VAN VELSOR, 2010; DI FABIO, 2010) AND *SELF-DIRECTED SEARCH (SDS)* (GEVERS, DU TOIT & HARILALL, 1994)

The third session was spent by discussions about George's family and their careers to explore systemic influences in his life. The career genogram was used to facilitate the discussion. A discussion of the *Self Directed Search (SDS)* followed the genogram. A surprising fact for George was that he was the first person in his family to ever get a degree which explains his lack of confidence to relate to experienced engineers and other graduates by times.

### 4.8.1 Career genogram

The session was conducted by drawing a genogram over three generations from both the maternal and paternal side of the family as George described them. The career of each significant family member was discussed as far as George had knowledge about it. The relationships between George and the family members were also observed. George initially was somewhat sceptical about the meaning of exploring his family and that drawing a genogram of the family would assist him in his career concerns. The genogram can be viewed in **ANNEXURE D**. A brief discussion on the exploration of the family will follow in the next paragraphs.

George's parents have been married for 40 years now and they were married for 15 years when George was born. He was a pre-mature baby at birth. George claims that there are similar traits between him and his mom. *'My mom is a strong extravert, she is pro-active and sociable. She knows everybody. She has lots of self-confidence and is comfortable with herself. She is extremely hard working'*. George describes his dad as *'being calm and peaceful. He truly believes that everything will work out as it should. He has a strong faith system and belief in God. He is almost too calm'* George claims to not have a lot of secrets and he admits that his parents know him well.

George gets along well with his mother's side of the family. He has a special relationship with his uncle (mom's brother) who is a successful businessman and a role model for George. This uncle is successful financially and has lots of business skills which George can learn from. The rest of the family on his mother's side are in the hospitality industry and are business owners. George's dad was the only child from parents who were both divorced before. Each of them had three children from the previous marriages. His dad never had close contact with his half siblings.

George recalls his mother's advice to never give up. She felt strongly that when he started something he had to finish it. The family members are intact with each other and his parents are always very supportive toward George. Neither his parents nor other family members have tertiary qualifications. This fact positions George as a first generation graduate.

### 4.8.2 Identified themes

The following sub-themes were identified by exploring George's family genogram as a narrative technique for career counselling. The subthemes are colour-coded according to the category and theme as presented in the summary of the data analysis.

**Table 4. 3:** Identified themes from the genogram

Categories	Themes	Sub-themes	Sub-subthemes	Genogram
Differential facets	Family back ground	First generation graduate		X
Differential facets	Family background	Only child		X
Differential facets	Family background	Strong identification with mother		
Differential facets	Family background	Supportive parents		X
Differential facets	Interest	Business		
Differential facets	Interest	Cooking		X
Differential facets	Personal traits	Hospitability		X
Differential facets	Personal traits	Resilient	Academic studies	X
Differential facets	Personal traits	Social	Hospitable	X
Differential facets	Values	Values relationships	Girlfriend	X
Dynamic facets	Aspirations	Financial freedom		X

#### 4.8.3 *Self-Directed Search (SDS)* (Gevers, Du Toit & Harilall, 1994)

George scored the highest on the *Investigative* category, then similar numbers on *Realistic* and *Social*. He also scored very high on *Enterprising*. George's profile may be described as a *high flat* profile because widely divergent interests are displayed. A high flat profile is often indicative of intellectually gifted individuals because their abilities allow them to have varied interests (Gevers, et al, 1997). Because these numbers are so close to each other, I decided to again observe the scores qualitatively and discuss them with George who is the expert of his own life. George confirmed these four categories in the SDS as personal high occupational interests.

#### 4.8.4 Identified themes

The following relevant categories, themes and sub-themes were identified by administering the *SDS*. The categories, themes and subthemes are colour-coded according to the categories and themes as presented in the summary of the data analysis.

**Table 4.4:** Identified themes from *SDS*

Categories	Themes	Subthemes	Sub-subthemes	SDS
Differential facets	Abilities	Leader	Leadership positions	X
Differential facets	Abilities	People skills	People pleaser Successful with technicians, network of contacts, humanistic	X
Differential facets	Abilities	Problem solver		Xx
Differential facets	Interests	Business, entrepreneurial		X
Differential facets	Interests	Outdoors, adventure sports, photography, travel in Africa	Adventurous	X
Differential facets	Interests	Engineering, natural sciences		X
Differential facets	Interests	Executive management	Leader	X
Differential facets	Personal traits	Achiever	Sports, employee	X
Differential facets	Personal traits	Achiever	It is important to win, results orientated	Xxx
Differential facets	Personal traits	Not rigid/flexible	Easy going, can adapt to social situations, fun to be with	X
Differential facets	Personal traits	Social	Hospitable, fun loving	X
Differential facets	Values	Values relationships		X
Developmental facets	Adaptive accomplishment	Work content	Hands-on, active, physically involved	X
Developmental facets	Challenges	Emotional control	Difficult to express emotion	X
Developmental facets	Coping Mechanisms	Learn by doing	Practical	X
Dynamic facets	Aspirations	Inspirational leader	Wants to lead well	X
Dynamic facets	Aspirations	Want to be technically strong/specialist to distinguish self		X
Dynamic facets	Work setting	Hands-on, technical		X
Dynamic facets	Script	Personal development, help others to grow		X



#### 4.9 SESSION 4: *MEYERS BRIGGS TYPE INDICATOR (MBTI)* (BRIGGS AND BRIGGS MYERS, 1994)

Session 4 was dedicated to the *MBTI*. It took quite some time to explain the dichotomies in detail because the outcomes of George's profile were not clear at first.

The self-scorable, form M of the *MBTI* was administered. George's preference in the first dichotomy: *Extravert-Introvert* was clear towards extroversion. On the second dichotomy: *Sensing-Intuitive*, the participant scored exactly the same numbers but had a slight preference toward Sensing. The third dichotomy had a similar outcome as equal numbers were scored for *Thinking-Feeling* with a slight preference toward Thinking. On the fourth dichotomy: *Judging-Perceiving*, the participant scored a moderate preference toward Perceiving.

The self-scorable form M allows the participant to score the questionnaire himself. The fact that two dichotomies (*Sensing-Intuitive* and *Thinking-Feeling*) had similar numbers confused George somewhat. In order to get a better understanding, we talked through each construct to affirm his preferences qualitatively. Reading more in-depth on these two dichotomies in the booklet, *Understanding your MBTI step II results* (Kummerow & Quenk, 2003) also helped the participant to agree on his type, namely ESTP. The next paragraph provides a brief description of this type representing *Extraverted Sensing with Introverted Thinking* (ESTP).

ESTP's tend to be easy-going, adaptable, action-oriented realists with a pragmatic approach. This type likes on the spot problem-solving. They tend not to worry but rather enjoy whatever comes along. ESTP's prefer actions to conceptual explanations and theories and enjoy each moment that they can be active with others. They focus on the here and now and are most comfortable with real things that can be handled, taken apart and put together. They learn best through doing.

According to the *Introduction to type* – booklet (Briggs Myers, 1998), others usually see ESTP's as gregarious, fun-loving, spontaneous, adventurous risk-takers and pragmatic trouble shooters. If they do not find a place where they can use their gifts and be appreciated for their contributions, they feel frustrated and may have trouble accepting structure and meeting deadlines. They tend to focus on excitement and activity entirely and get caught up in external activities. ESTP's can put enjoying life ahead of important obligations.

##### 4.9.1 ESTP and career

ESTP's tend to have a desire to work with their hands in jobs that require careful attention to detail such as installing, repairing or operating equipment and carpentry. Outdoor work where this type can put their skills to practical use is found appealing. Potential strengths listed in the

*Introduction to type and career-* booklet (Hammer, 2007) are an entrepreneurial approach, crisis management, the ability to sell and promote, adaptability and the willingness to take risks.

In the career exploration process, ESTP's have preferred methods and also certain potential obstacles in goal setting, information gathering, making contact with others and in decision making (Hammer, 2007). In goal setting, ESTP's have immediate, tangible goals and they are able to take advantage of unforeseen opportunities, but they may have no clear sense of long-term direction or may have no action plans to reach their goals. ESTPs gather information by talking to experienced and informative people and may sometimes get overwhelmed by detail. ESTP's have an extensive network of contacts. In their strategy to make contact with others, they may spend too much time in unproductive networking. In decision making, ESTP's tend to conduct a logical analysis of alternatives, weighing pros and cons of the different options. They may neglect important values by only focusing on what is logical and sometimes tend to put off decisions.

#### **4.9.2 Identified themes**

The following relevant categories, themes and sub-themes were identified by administering the *MBTI*. The categories, themes and subthemes are colour-coded according to the categories and themes as presented in the summary of the data analysis.

**Table 4.5:** Identified themes from the *MBTI*

Categories	Themes	Subthemes	Sub-subthemes	MBTI
Differential facets	Abilities	People skills	Network of contacts	X
Differential facets	Abilities	Problem solver		X
Differential facets	Interests	Business, entrepreneurial		X
Differential facets	Interests	Outdoors, adventure sports, photography, travel in Africa	Adventurous	X
Differential facets	Personal traits	Extravert	Needs loyalty from friends, extensive network	Xx
Differential facets	Personal traits	Not rigid/flexible	Easy going, can adapt to social situations, fun to be with	XX
Differential facets	Personal traits	Social	Hospitable, fun loving	X
Developmental facets	Adaptive accomplishment	Work content	Overwhelmed by detail	X
Developmental facets	Adaptive accomplishment	Work content	Hands-on, active, physically involved	Xx
Developmental facets	Coping Mechanisms	Learn by doing	Practical	X
Dynamic facets	Work setting	Hands-on, technical		X
Dynamic facets	Script	Personal development, help others to grow		X

George was puzzled with the similarities on the *Sensing-Intuition* and *Thinking-Feeling* dichotomies. In his reflection on this session he commented that '[t]his explained a lot of internal conflict situations'. He also commented that he would 'hopefully be able to know exactly when and in what situation to use each of the different traits [dichotomies]'

#### 4.10 SESSION 5: *CAREER INTEREST PROFILE (CIP)* (MAREE, 2010) AND LIFE CHAPTERS TECHNIQUE (COCHRAN, 1997)

##### 4.10.1 Career Interest Profile (*CIP*)

According to George's reflection this session was one of the 'most rewarding sessions' in the process of developing and exploring his sense of self. An overview of the most significant information derived from this assessment will be discussed in the next paragraphs.

In Part 1 of the *CIP*, George was unaware of the information regarding his parent's qualifications. His parents do not have tertiary qualifications. George mentioned that his mother's family members are in diverse businesses. The hospitality industry, especially catering is well

known to his mother's family. George mentioned Mathematics and Natural Sciences as his favourite subjects at school and declared languages to be the least preferred subjects.

In Part 2 of the *CIP*, career categories are ranked according to preferences and dislikes. George ranked his preferred career categories as follows:

- Engineering and the built environment
- Executive management practice
- Research
- Entrepreneurship, running and maintaining a personal business
- Adventure, plants, animals and the environment.

George ranked his least preferred career categories as follows:

- Art
- Word artistry
- Office based (administrative, clerical and organisation) activities
- Musical
- Legal practice and security activities.

It was clear that George is content with the career choice he made. During our discussion George confirmed his interest in chemical engineering and his interest and aspiration for being in executive management. Part 3 of the *CIP* confirmed George's interest. He indicated that the career he would like most is to be an engineering manager responsible for new process development and implementation because he enjoys developing new processes. The second career he would prefer is to be a life coach because he enjoys working with people which links with his interest in management and leadership. The third indication of a preferred career for George is to be a project manager and his reason was that he enjoys the regulated structure applicable to times and outcomes associated with project management. His dream career is to be a project manager on a site where there is no infrastructure.

The careers George would like least are firstly to be an artist because he can't draw and drawing seems pointless to him. Secondly he would not like to be a social worker because he perceives himself too soft for that. Thirdly he does not want to be an accountant because he would not like to do the same things every day. Part 4 of the *CIP* stimulates the career-story narratives and will be discussed in the following paragraphs.

#### **4.10.1.1 Strengths and weaknesses**

The first question enquires about the client's strengths and weaknesses. George mentioned his strengths as: 1) Being easy to communicate with in social situations, 2) He is not rigid and he

takes things as they come (*'Elke dag kan maar gebeur soos hy wil'* [Every day can happen as it may]), 3) He is resilient (*'...as ek iets begin gaan ek dit nie halfpad los nie'* [If I start with something, I won't leave it halfway]).

George describes his weaknesses as 1) Thinking too much and doing too little, 2) Being impatient with things that do not work, traffic and with people who react too slowly to his requests, 3) He describes himself as a better starter than a finisher especially with study projects.

#### **4.10.1.2 Special skills and talents**

George gets along with most people. He mentions that he is flexible to adapt to the people he is with. It is easy for him to associate with technicians and he also feels comfortable with management. Other skills George has are cooking (especially 'braai') and he also likes to solve problems. He finds it hard *not* to attend to any technical challenge coming his way.

#### **4.10.1.3 Perceived idea that others have of him**

George believes that others like to be with him because he is fun to be with. George also realised that people easily trusts him which was proven in the residence where he stayed at university. The technicians whom he used to work with for the first six months of the year also trusted him fairly quickly.

#### **4.10.1.4 Values**

George declares that money and achievements are very important to him at that stage. He saves a substantial portion of his salary in investment funds to be able to get to a stage where he would not need to be concerned about money anymore (*'ek wil hulle [beleggingsfondse] so vinnig moontlik van so aard kry dat mens nie regtig meer hoef te "worry" nie'* [I want the (investment funds) to grow as fast as possible that one does not need to worry anymore]). Achievements are valued because he views achievements as the way to move up the corporate ladder in his company. He also treasures relationships with fellow workers, his girlfriend and other friends.

#### **4.10.1.5 Role models**

Role models are 'imaginative resources that individuals use to inform and shape their identities' (Savickas, 2011, p.85). Role models are heroes or good examples who bring meaning to lives and enables clients to make sense of their own contexts. The characteristics of role models mentioned by clients are the attributes they perceive necessary to overcome their major preoccupations. Clients duplicate these characteristics to address and overcome these concerns (Savickas, 2011). George shared role models firstly from his childhood and then shared his current role models with me.

### **i. Early role models**

The role models George had in his youth were firstly Ryk Neethling and Roland Schoeman, the two famous South African swimmers who won several gold medals at the Olympic Games. George admired them because they always acted professionally in presenting South Africa, are humble despite of their achievements and both of them were good competitors.

George secondly admired a cartoon character, Brakkenjan from his childhood days. Brakkenjan is a courageous cartoon dog with three loyal friends who were called the four musketeers. They rode on horses and stood up for what was right and honest in life. Brakkenjan could always be distinguished from his friends because he constantly wore something red.

The third role model from George's youth is his uncle (mother's brother). Parents and family members are regarded as guides who differ from role models. Role models are selected by choice where guides are not choices but a given in a client's life (Savickas, 2011). George was quite adamant about Uncle Joe being a role model for him although he is a family member Uncle Joe is a successful businessman with a huge car and house and he often went overseas. Uncle Joe was quite involved with his family when George was in high school and they often had good conversations. George also admired his business skills.

### **ii. Current role models**

The current role models in George's life are from his work environment. Firstly he admires his line manager at the company where he works. He is respected for the way he treats other people. This manager knows exactly how to win the loyalty of his subordinates and he brings out the best in them. George never wants to disappoint him (*'... as hy vir jou sê hy is teleurgesteld in jou sal dit wees asof jou ouers vir jou sê hulle is teleurgesteld'* [... if he (the line manager) tells you that he is disappointed in you it would be as if your parents telling you that they are disappointed in you]).

Secondly George admires Armand who is an area manager at his company. Armand is technically very strong and skilled. He knows the company plant extremely well. Thirdly, George admires the co-founder of *Google* namely Sergey Brin who seems surprisingly relaxed and at peace with himself while presenting on *TED talk*. George commented on his simple clothes, confidence, peacefulness and his 'no-care' attitude.

George has aspirations to achieve success technically, but also to be a courageous manager and leader. He wants to be distinguished from others for personal competence and high ethical standards. George aspires to have a relaxed, confident and peaceful style.

#### **4.10.1.6 Influences**

The fact that George was a serious swimmer for 10 years of his life had a significant influence on him. According to George his swimming career influenced his identity and shaped his picture of life. George admits that he was greatly influenced by two of his managers the past six to eight months at work. Another person who shaped George's thoughts was the life-coach who counselled him in his third year at university. His parents also played a big role in George's life.

#### **4.10.1.7 Leadership positions**

George had leadership positions at school being deputy head boy both in primary and high schools. He was also the captain of the provincial swimming team for Free State in his matric year. George was part of the House Committee at University responsible for the first years in that year.

#### **4.10.1.8 Motto and favourite quotations**

A motto or favourite saying articulates the words of wisdom that clients have for themselves (Savickas, 2011). The motto is regarded as a call to action and also gives reassurance to the client 'suggesting an episode that will move the plot to the next scenario' (Savickas, 2011, p.112). These words of wisdom are regarded as the client's best advice for himself.

The motto that was quickly articulated by George was: '*Make sure you leave a good taste in people's mouths when you leave them*'. The second saying is: '*Do your best*'. George wanted to know whether the words from a song would suffice. When I agreed, the following was quoted: '*anything too dumb to be spoken should be sung, a song is never finished-only abandoned, so sing if you have nothing left to say*' When I asked George to explain the meaning of the lyrics he said: '*As jy iets nie wil sê nie, doen iets anders-doen iets wat "fun" is*' [if you don't want to say something, do something else-do something that is full of fun]. He explained that you do not need to conform if you do not want to, you can do something else to escape that. George revealed that listening to music is a coping mechanism for him.

#### **4.10.1.9 Favourite magazines, TV-programmes and websites**

George likes the magazines *Men's Health* for his interest in sports and physical activity, *Popular Mechanics*, because it is technical and has the latest technology gadgets and *National Geographic*, because it has relevant news. His favourite TV programmes are investigation and crime stories, food channels, movies and sports.

By investigating the favourite magazines clients read and asking about regular television shows they watch, career counsellors can analyse the work settings that interest them. Work



settings can be looked at according to places, the people, problems and procedures which are of most interest to the client (Savickas, 2011). George indicated his interest to be physically involved in what he does. He prefers a technical environment where people do relevant problem solving which would benefit the broader society.

#### 4.10.1.10 Favourite stories

George is not a keen reader and actually only read two to three complete books in his life. The first book which had a significant influence on him is *The Shack*. The Shack is the story of a very sad father who got healed from the pain of his daughter's death through a spiritual encounter with God in person.

The title of the other book is *How to save a life* which tells the story of a high school boy who lost his way through too many parties, binge drinking and drugs. His girlfriend also fell pregnant. They received help from a church pastor who helped them change their lives. George specifically remembers the part where his friends forced this boy to drink too much after he was converted. He couldn't drive back home and wanted some help. The only person who was willing to help him was the pastor. In the end both the boy and his girlfriend became youth pastors in their local church.

A movie that George still watches from time to time is *The Lion King*. The sense of vulnerability of the young lion who lost his dad and had to fight his way through life and who then turned out to be the king touches him. George mentioned the difficulty for South African men to show real emotion and to expose themselves by showing vulnerability.

Stories hold the life lessons in place that was learnt by the individual and these lessons direct the way forward 'by creating scenarios that link past achievements to future initiatives' (Savickas, 2011, p.105). Individuals hold on to these stories because it helps them to make meaning and it create agency to reach their goals. These inner stories provide a 'subjective holding environment' that contains the self. A holding story helps the client to master career development tasks, overcome vocational transitions and to get through work traumas.

The three stories told by George carried the theme of overcoming adversity whether it was the murder and /or death of a loved one or finding healing from addictive habits to be able to conquer and be in a position to be of service and to lead others. The theme of spirituality and a relationship with God as a means to be able to overcome difficulties in life is dominant in George's life.



#### 4.10.1.11 Biggest successes and failures

George claims as his biggest success to be on a personal spiritual level. In his final year he was baptised and he made a personal commitment to follow God. The success for him was when he had the courage to tell the first years in his residence about this experience when he was in his final year. The other huge success for him was to get his Chemical Engineering degree. George also mentions the various trophies he received at the end of his school years as part of his successes. The biggest failures in George's life will be discussed later in this chapter under the heading, *Early Recollection Technique (ERT)*.

#### 4.10.1.12 Identified themes

The following sub-themes were identified by administering the *Career Interest Profile (CIP)* (Maree, 2010). The categories, themes and sub-themes are colour-coded according to the categories and themes as presented in the summary of the qualitative data analysis.

**Table 4.6:** Identified themes from the *CIP*

Categories	Themes	Subthemes	Sub-subthemes	CIP
Differential facets	Abilities	Chemical/process engineer		X
Differential facets	Abilities	Swimming champion		
Differential facets	Abilities	Leader	Leadership positions	X
Differential facets	Abilities	People skills	People pleaser Successful with technicians	Xxx
Differential facets	Abilities	Problem solver		Xx
Differential facets	Interests	Business		X
Differential facets	Interests	Cooking		X
Differential facets	Interests	Outdoors, adventure sports, photography, travel in Africa		
Differential facets	Personal traits	Achiever	Employee: Wants to be loyal and excellent worker	X
Differential facets	Personal traits	Achiever	Sports: it is important to win	X
Differential facets	Personal traits	Emotional dependency	Self-destructive	Xxx
Differential facets	Personal traits	Emotional dependency	Needs affirmation/approval	X
Differential facets	Personal traits	Emotional dependency	Needs loyalty from friends	X

Categories	Themes	Subthemes	Sub-subthemes	CIP
Differential facets	Personal traits	Hospitability		X
Differential facets	Personal traits	Impatient	Doesn't like to struggle	X
Differential facets	Personal traits	Impatient	Traffic	X
Differential facets	Personal traits	Not rigid/flexible	Easy going, can adapt to social situations, fun to be with	Xx
Differential facets	Personal traits	Resilient	Academic studies: keeping on in spite of failure	X
Differential facets	Personal traits	Social	Hospitable	Xxx
Differential facets	Value	Ethical & spiritual principles		Xxx
Differential facets	Values	Values achievements		X
Differential facets	Values	Values money		X
Differential facets	Values	Values relationships		X
Differential facets	Values	Ethical principles	Wants to do what it right	
Developmental facets	Adaptive accomplishment	Career path	Concern	
Developmental facets	Adaptive accomplishment	Fitting in	New town, First year university	X
Developmental facets	Adaptive accomplishment	Further studies	What, When	
Developmental facets	Adaptive accomplishment	Relationships	Work stress impact on relationship with girlfriend	X
Developmental facets	Adaptive accomplishment	Relationships	Stress with girlfriend because of work	X
Developmental facets	Adaptive accomplishment	Relationships	Away from friends	X
Developmental facets	Adaptive accomplishment	Relationships	Work hard at relationships with fellow workers	X
Developmental facets	Adaptive accomplishment	Work content	Not stimulating enough: not appropriate division	
Developmental facets	Adaptive accomplishment	Work content	Doesn't like office, admin jobs	X
Developmental facets	Adaptive accomplishment	Work content	Routine work is boring	X
Developmental facets	Adaptive accomplishment	Work role	Concern	X
Developmental facets	Challenges	Academic work	Struggled at university	X
Developmental facets	Challenges	Lack of confidence	Uncomfortable with experienced engineers	X

Categories	Themes	Subthemes	Sub-subthemes	CIP
Developmental facets	Coping Mechanisms	Career counselling	Career counsellor	X
Developmental facets	Coping Mechanisms	Listening to music		X
Developmental facets	Coping mechanisms	Counselling	Life-coach	Xx
Dynamic facets	Aspirations	Financial freedom		X
Dynamic facets	Aspirations	Inspirational leader	Wants to lead well	X
Dynamic facets	Aspirations	Inspirational leader	Wants to leave a legacy	X
Dynamic facets	Aspirations	Inspirational leader	Interested in corporate and management structure as possible job in future	X
Dynamic facets	Aspirations	Wants to be technically strong/specialist to distinguish self		Xxx
Dynamic facets	Pre-occupations	Disappointment of others		X
Dynamic facets	Pre-occupations	Failure, fall	Academically	Xxx
Dynamic facets	Work setting	Hands-on, technical problem solving		Xx
Dynamic facets	Script	Personal development, help others to grow		Xx
Dynamic facets	Self-advice	People, work, life		Xxx

#### 4.10.2 Life chapters (Cochran, 1997)

The title of George's life story is *One man's search for inner excellence*. The heading of the first chapter is *The short years* (pre-school years), the second chapter will be called *The unknown* (primary school years), the third chapter is named *Settling into the routine* (high school) and the final chapter which tells the story of George's university years will be called *Crazy times*. With these titles George confirmed his pursuit for growth and development on a deeper level. George also confirms his struggle and development at university toward becoming what he is today.

##### 4.10.2.1 Identified themes

By asking George to provide names for the chapters in his life up to now, the following aspects emerged. The categories, themes and sub-themes are colour-coded according to the categories and themes as presented in the summary of the data analysis.

**Table 4.7:** Identified themes from Life chapters

Categories	Themes	Subthemes	Sub-subthemes	Life chapters
Differential facets	Values	Ethical & spiritual principles		X
Developmental facets	Challenges	Academic work	Doubt if degree is sufficient, doubt study choice, struggled at university	X
Dynamic facets	Aspirations	Inspirational leader	Wants to leave a legacy	X
Dynamic facets	Pre-occupations	Success	Spiritual	X

#### 4.11 SESSION 6: *CAREER ADAPT-ADAPTABILITY SCALE (CAAS)* (SAVICKAS & PORFELI, 2012) AND *EMOTIONAL QUOTIENT INVENTORY (EQ-i)* (BAR-ON, 2004)

Session 6 was dedicated to the *CAAS* and the *EQ-i*. The *CAAS* and the *EQ-i* was completed online immediately after the introductory session.

##### 4.11.1 *Career Adapt-Adaptability Scale (CAAS)* (Savickas & Porfeli, 2012)

George scored significantly lower on Career confidence than on the other constructs. Low scores on career confidence in the *CAAS* are indicative of a lack of self-esteem and/or self-efficacy. The roots of low career confidence levels may be traced back to childhood. Low confidence scores will impact on a lower tendency to try new activities or to seek out opportunities to engage in self-improvement and career development. Typical interventions would include individual counselling directed toward understanding one's self-concept, accepting one's self and improving self-esteem (Galvin & Berger, 2013). Confident individuals work proactively to learn new skills and solve problems which enable them to overcome obstacles and navigate career transitions.

##### 4.11.2 Identified themes

The following relevant categories, themes and sub-themes were identified by administering the *CAAS*. The categories, themes and sub-themes are colour-coded according to the categories and themes as presented in the summary of the data analysis.

**Table 4.8:** Identified themes from the *CAAS*

Categories	Themes	Subthemes	Sub-subthemes	CAAS
Developmental facets	Adaptive accomplishment	Career path	Concern	X
Developmental facets	Adaptive accomplishment	Fitting in	New town, first year university	X
Developmental facets	Adaptive accomplishment	Further studies	What, when	X
Developmental facets	Adaptive accomplishment	Relationships	Work hard at relationships with fellow workers	X
Developmental facets	Adaptive accomplishment	Work content	Not stimulating enough: not appropriate division	X
Developmental facets	Adaptive accomplishment	Work content	Routine work is boring Doesn't like office, admin jobs, overwhelmed by detail	X
Developmental facets	Adaptive accomplishment	Work content	Hands-on, active, physically involved	X
Developmental facets	Adaptive accomplishment	Work role	Concern	X
Developmental facets	Challenges	Academic work	Doubt if degree is sufficient, Doubt study choice, struggled at university	X
Developmental facets	Challenges	Lack of Confidence	People with more experience	X

#### 4.11.3 *Emotional Quotient Inventory (EQ-i)* (Bar-On, 2004)

On the *EQ-i* version 2, George scored in the zone of effective functioning on the total average and also on all the constructs. He scored the highest on *Self-actualisation* which refers to pursuit of meaning. George confirmed that finding purpose and enjoyment in his work is very important to him. This was confirmed by disclosing his attendance of several work related workshops during this year because he wanted to develop to his fullest potential. The fact that he embarked on this journey to explore his sense of self also confirms his urge for self-actualisation.

George scored the lowest on emotional *Independence* although the score was still far into the effective functioning zone. The score represents willingness and capability of choosing own courses of action, but there are times when the risk and responsibility of being independent may be too heavy. In such times George will allow others to step up and take charge of the situation.

#### 4.11.4 Identified themes

The following relevant categories, themes and sub-themes were identified by administering the *EQ-i*. The categories, themes and sub-themes are colour-coded according to the categories and themes as presented in the summary of the data analysis.

Table 4.9: Identified themes from *EQ-i*

Categories	Themes	Subthemes	Sub-subthemes	<i>EQ-i</i>
Differential facets	Abilities	People skills	People pleaser, successful with technicians, network of contacts, humanistic	X
Differential facets	Abilities	Problem solver		X
Differential facets	Personal traits	Achiever	It is important to win, results orientated	X
Differential facets	Personal traits	Emotional dependency	Negative thoughts	X
Differential facets	Personal traits	Emotional dependency	Needs affirmation/approval	X
Differential facets	Personal traits	Not rigid/flexible	Easy going, can adapt to social situations, fun to be with	X
Differential facets	Personal traits	Social	Hospitable, fun loving	X
Developmental facets	Adaptive accomplishment	Career path	Concern	X
Developmental facets	Adaptive accomplishment	Relationships	Work hard at relationships with fellow workers	X
Developmental facets	Adaptive accomplishment	Work role	Concern	X
Developmental facets	Coping Mechanisms	Career counselling	Career counsellor	X
Developmental facets	Coping mechanisms	Counselling	Life-coach	X

#### 4.12 SESSION 7: EARLY RECOLLECTIONS TECHNIQUE (ERT) (MAREE, 2007)

The early recollections technique was conducted in the seventh session with George. By that time he seemed relaxed in the session and a safe and trustful relationship has developed. I felt extremely privileged when George offered to share another secret with me at the end of the session which seemed to be the most significant story to clarify his pre-occupations. George's home language is Afrikaans. The stories are therefore transcribed first in Afrikaans and then translated into English.

##### 4.12.1 Story 1: Fall from bicycle

*'Ek onthou ek het ... ek dink ons was 5 jaar gewees. Toe het my vriend van daardie tyd, ... Andre ... toe het hy met sy fiets geval oppad... Ek en my ma moes hom gaan oplaai en toe het hy gedink hy moet met sy fiets kom na my toe. Ons kom toe met dieselfde pad en toe draai hy om en toe ry hy op die sypaadjie en toe val hy. Ek onthou dit ... ek dink ons was 5 gewees?'*

[I remember I ... I think we were five years old. My friend of that time, his name was ... Andre ...he fell on the road with his bicycle. My mom and I had to fetch him but he thought he had to come to us with his bicycle. We came the same way and he turned around as he saw us. He drove on the side of the road and then he fell from his bicycle].

#### 4.12.2 Story 2: Fail to win

*'Ek onthou my eerste swemgala. Ek dink ek was 9 gewees... (lag verleë) Ek het halfpad omgedraai. (lag) en weer teruggeswem. Ek het nogal saam met groot ouens geswem – dit was nie almal net my ouderdom nie ... ek dink ek was maar bietjie bang gewees en ... ek weet nie regtig hoekom nie. Die skoot het geklap, ek het geswem tot halfpad en toe is dit vir my nie meer lekker nie. Toe stop ek en toe swem ek terug anderkant toe ... Toe het een van die ouer ouens ingedui – hy sou die 'race' na ons geswem het. En toe duik hy in. Toe kom haal hy my'.*

[I remember my first swim gala. I think I was nine years old (embarrassed laughing). I turned around halfway (laugh) and swam back to the start. I competed with big guys that day. Not all of them were in my age group. ... I think I was a bit nervous and ... I don't really know why. The shot fired and I swam to the middle of the pool and then it wasn't fun anymore. I stopped and turned back to the start. Then one of the senior guys dived in who was supposed to swim in the next race. He dived in and came to collect me].

#### 4.12.3 Story 3: Triumph through wisdom

*'Ek onthou die kleuterkonsert . Ek dink dit was die Kersfeeskonsert. Ons juffrou was Juf Ella du Preez van ons speelgroepie. Ek dink ons was 5 gewees. Ek was een van die sterrekykers gewees (glimlag). Ek onthou dit ...'*

[I remember the pre-school concert. I think it was the Christmas concert. Our pre-primary school teacher was mrs Ella du Preez. I think we were five years old. I was one of the three wise men / magi (smile). I remember that ...].



#### 4.12.4 Significant event

As the discussion progressed George remembered another significant occurrence which occurred when he was in grade six. This situation would have an influence on his sense of self for the whole of his high school years and first years at university, until he arrived in the office of a professional life-coach. George and his friends were at his home having a sleep-over in the tree house. It happened that the boys compared their manhood. At that age George was physically less mature than his friends, partly due to his intensive swimming programme. George mentions that he only started shaving in his grade 11-year while all his friends were already having beards in grade 7. George was severely upset, left his friends and returned to sleep inside the house. The events of that evening raised feelings of anger and humiliation, with a lingering feeling of inferiority. Until today he believes that his reaction ruined some of his closest friendships. He only understood the impact of this situation in his third year at university when he could not cope with his academic failure and did not know where he fit in at his residence. He realises now the enormity of this childhood experience on his sense of self. After the tree house event, George tried to prove himself by practising even harder at his swimming, until he became a swimming champion in his matric year. He admits that he never wanted to be as competitive in sports. This experience also became a reason why he did not participate in group sports such as rugby and cricket at school. Being a physically large and attractive man today, he does not have to prove himself physically anymore.

#### 4.12.5 Discussion

The first two stories have the same theme of 'to fall' or 'failure'. Both stories happened in front of others and involved vulnerability and pain. In the first story it was about physical pain. The second story was about a boy giving up because he couldn't live up to the challenge and failed to finish the race. When these stories were discussed and their possible significance explained to him, George just sat back quietly. His comments were: '... *ek wil nie regtig graag mense teleurstel nie ...ek sal eerder 'overqualified' wees vir 'n spesifieke ... werk as wat ek op 'n plek is waar ek nie regtig kan doen wat ek wil of wat hulle verwag nie en dan stel ek hulle teleur daarin*' [...I do not really want to disappoint people ... I would rather be overqualified for a specific ... job rather than not be in the right place where I can do what I want or what they expect of me and disappoint them] We spoke about his sensitivity toward disappointing others. He admitted that 'others' are '*... mense ... wat regtig "close" is aan my*' [the people who are really close to me]. I asked him about the weight he gives to disappointing others and disappointing



himself. George's comment was: *'Ek wil nie sê ek wil voel ek wen die heelyd nie, maar ek wil net ... ek wil maar net nie myself teleurstel nie'* [I don't need to win all the time, but I do not want to disappoint myself].

He then started to tell me about the tree house episode and was moved by the realisation of what was currently happening to him. The reason he came to see me was to explore where he fits into the company, what he should do to position himself best to distinguish himself from others in the company and what and when he should start further studies. At that stage he was working in a division between technicians were doing practical maintenance work and he didn't feel that he fitted in there. He took every opportunity he could to do short courses for personal enrichment which were presented in-house by the company up to a point and that he realised that he took on too much. George was trying to compensate for the lack of stimulation at work and he was trying to manage his fear and anxiety of possible failure or underachievement. George realised that he is constantly pushing and fighting against possible failure. He is pre-occupied with being successful and wants to achieve through all means. George's urgency to study further is also born from this preoccupation.

In the third story (*Triumph through wisdom*) George was on stage and played one of the wise men (an astronomer) in the nativity scene. I asked George what advice to himself he was drawing from this story. He replied that he experienced accomplishment by being seen by others as a person who brings knowledge and wisdom. George just nodded his head. I pointed out the relation to his values and role models. He had achievements high on his list when we spoke about values *'...achievement is nou vir my belangrik, want ek het agtergekom deur achievements jy verder kan kom in die besigheid'* [... achievement is important to me now because I realised it is through achievements that you can progress in the company]. The third story also relates to his role models. George referred to the two Olympic champions in swimming (being on stage), Brakkenjan (courageous warrior who always did what was right and notable to others by wearing red), his line manager (*'sy manier hoe hy dinge hanteer en hoe hy die beste uit die mense kan kry'* [the way he handles things and how he can gets people to perform at their best]) and Armand, the colleague who excels in technical engineering knowledge. George was very quiet at first and then elaborated on the accolades he received at the end of grade 12 (deputy head boy, two distinctions, sportsman of the year, the 'all-rounder' trophy). It was clear to me that George actively tried to master what he passively suffered.

#### 4.12.6 Identified themes

By administering the early recollections technique (ERT) the following facets and themes emerged. The categories, themes and sub-themes are colour-coded according to the categories and themes as presented in the summary of the qualitative data analysis.

**Table 4.10:** Identified themes from the *ERT*

Categories	Themes	Subthemes	Sub-subthemes	ERT
Differential facets	Personal traits	Achiever	It is important to win	X
Differential facets	Personal traits	Emotional	Self-destructive	X
Differential facets	Personal traits	Emotional dependency	Needs affirmation/approval	Xx
Differential facets	Personal traits	Emotional dependency	Needs loyalty from friends	X
Differential facets	Values	Values achievements	Success	X
Developmental facets	Adaptive accomplishment	Fitting in	New town, First year university	X
Developmental facets	Challenges	Lack of confidence	People with more experience	X
Developmental facets	Challenges	Lack of confidence	Humiliation: not good enough, have to prove myself	X
Developmental facets	Challenges	Emotional control		X
Developmental facets	Coping mechanisms	Counselling	Life-coach	X
Dynamic facets	Pre-occupations	Disappointment of others		X
Dynamic facets	Pre-occupations	Failure, fall	Academically	XXX
Dynamic facets	Pre-occupations	Success	Spiritual	X

#### 4.13 SESSION 8: CAREER CONSTRUCTION INTERVIEW (CCI) (SAVICKAS & HARTUNG, 2012)

The format of Savickas and Hartung (2012) was used as a guide to do the Career Construction Interview. Although these themes were explored and mentioned in the *CIP* it was useful to follow up and package the information that surfaced in that session. The CCI-session was conducted only a week after the session in which the *CIP* was explored. The CCI-session was also used as a meta-reflective (Maree, 2013) opportunity for George to advise himself. The outcomes of the session only are mentioned here.

The five questions which informed these outcomes are 1. Who did you admire when you were growing up? 2. Do you read any magazines or watch any television show regularly? Which ones? What do you like about these magazines or television shows? 3. What is your favourite book or movie? Tell the story. 4. Tell me your favourite saying or motto. 5. What are your earliest recollections? The outcomes of these questions will be represented in **Table 4.11**, as created by Savickas and Hartung (2012).

**Table 4.11:** Career construction interview<sup>9</sup>

<p><b>PREOCCUPATION</b> Early recollections</p>	<p><b>I am concerned about</b> failure in myself and disappointment of significant others which explains my strong motivation to achieve.</p>
<p><b>SELF</b> Role models</p> <p><b>SETTING</b> Magazines, TV shows</p> <p><b>SCRIPT</b> Favourite story from book or movie</p> <p><b>SUCCESS FORMULA</b> Use your SELF, SETTING, and SCRIPT to write a one-sentence mission statement</p>	<p><b>I am becoming</b> a financially free person, an expert in work related knowledge and an inspirational leader.</p> <p><b>I like being in places where people do</b> hands-on, technical problem solving activities.</p> <p><b>The plot of my favourite book or movie is</b></p> <ul style="list-style-type: none"> <li>• Life is a process</li> <li>• Enrichment-transformation-self-explorations and growth</li> <li>• Continuous upliftment and understanding</li> </ul> <p><b>Therefore, in these places I want to</b> make it possible for myself and others to grow.</p> <p><b>I will be most happy and successful when I am able to be</b> <u>financially free and technically strong</u> <u>in places where people do hands-on, technical problem solving activities</u> <u>so that I can grow and eventually have a good understanding of that environment and allow other people to grow in themselves.</u></p>
<p><b>SELF-ADVICE</b> Motto</p>	<p><b>My motto contains my best advice to myself for dealing with my career concerns. To apply my success formula now, the best advice I can give myself is</b></p> <ul style="list-style-type: none"> <li>• Leave a good taste in people’s mouths when you leave them</li> <li>• Do your best!</li> <li>• Everything too dumb to be spoken should be sung...</li> </ul>

Retrieved from [www.vocopher.com](http://www.vocopher.com).

George was impressed by the succinct summary of his future career he could take home. His reflection after the session speaks for itself: *‘I found this session very positive and enjoyable.*

<sup>9</sup> Copyright on format (Savickas & Hartung, 2012).

*The structuring of one's mission and vision by looking back into your past and the role models and interests you had as a child was very funny, yet interesting. Erna helped me laying out what all the role models, interests and activities meant and we wrote one phrase almost as a personal life motto for me. I enjoyed this activity and it helped me realise where I should focus most of my attention in my current position'.*

#### 4.13.1 Identified themes

The following relevant categories, themes and sub-themes were identified by administering the Career Construction Interview (CCI). The categories, themes and sub-themes are colour-coded according to the categories and themes as presented in the summary of the data analysis.

**Table 4.12:** Identified themes from administering the CCI

Categories	Themes	Subthemes	Sub-subthemes	CCI
Differential facets	Abilities	People skills	People pleaser Successful with technicians	X
Differential facets	Abilities	Problem solver		Xx
Differential facets	Personal traits	Achiever	Sports, employee	Xxx
Differential facets	Personal traits	Emotional dependency	Self-destructive	X
Differential facets	Values	Ethical & spiritual principles		X
Differential facets	Values	Values achievements		X
Differential facets	Values	Values achievements	Success	X
Differential facets	Values	Values money		X
Differential facets	Values	Values relationships		X
Differential facets	Values	Ethical principles	Wants to do what it right	X
Developmental facets	Adaptive accomplishment	Further Studies	What, when	X
Developmental facets	Adaptive accomplishment	Relationships	Stress with girlfriend because of work	X
Developmental facets	Challenges	Academic work	Doubt if degree is sufficient, doubt study choice, struggled at university	X
Developmental facets	Challenges	Emotional control		X
Developmental facets	Coping Mechanisms	Listening to music		X

Categories	Themes	Subthemes	Sub-subthemes	CCI
Dynamic facets	Aspirations	Financial freedom		X
Dynamic facets	Aspirations	Inspirational leader	Wants to lead well	X
Dynamic facets	Aspirations	Inspirational leader	Wants to leave a legacy	X
Dynamic facets	Aspirations	Inspirational leader	Interested in corporate and management structure as possible job in future	X
Dynamic facets	Aspirations	Want to be technically strong/specialist to distinguish self		Xxx
Dynamic facets	Pre-occupations	Disappointment of others		X
Dynamic facets	Pre-occupations	Failure, fall	Academically	Xx
Dynamic facets	Pre-occupations	Success	Spiritual	X

#### 4.14 SUMMARY OF THE THEMES

A summary of the categories, different themes, sub-themes and the source is represented in **Table 4.13**. The number against each theme indicates the session in which the theme emerged<sup>10</sup>. An outline of the inclusion and exclusion criteria for the sub-themes, including selected quotes of the participant's responses is given in **ANNEXURE C**.

<sup>10</sup> Content per session: 1: Introductory session; 2: Collage; 3: Genogram & SDS; 4: MBTI; 5: CIP & Life chapters; 6: *CAAS & EQ-i*; 7: ERT; 8: CCI.

**Table 4.13:** Summary of the categories and identified themes from all data sources

<b>Category A: DIFFERENTIAL PERSPECTIVE</b>	
Imbedded content within the individual with stable probabilities.	
<b>Theme 1: Family background</b>	
Family background relates to relevant facts regarding the participant's family which is inherent in the sense of self of the participant.	
1.1 Only child	1, 3
1.2 Supportive parents	1, 2, 3
1.3 First generation graduate	1, 3
<b>Theme 2: Values</b>	
Values relate to the judgement of the participant of what is important in his life.	
2.1 Achievements	1, 5, 7
2.2 Money	1, 5
2.3 Relationships	3, 1, 5
2.4 Ethical and spiritual principles	1, 2, 5, 8
<b>Theme 3: Abilities</b>	
Abilities relate to proven skills that the participant portrays which identifies parts of his sense of self.	
3.1 Swimming champion	1, 2, 5
3.2 Leader	1, 2, 3, 5
3.3 Chemical engineer	1, 2, 5
3.4 Problem solver	2, 3, 4, 5, 6, 8
3.5 People skills	1, 2, 3, 4, 5, 6, 8
<b>Theme 4: Interest</b>	
Interest relates to topics that excites the attention and curiosity of the participant.	
4.1 Business, entrepreneurial	1, 2, 3, 4, 5
4.2 Cooking	1, 2, 3, 5
4.3 Adventure and outdoors	2, 3, 4, 5
4.4 Engineering, natural sciences	3, 5
4.5 Executive management	5
<b>Theme 5: Personal traits</b>	
Personal traits refer to habitual patterns of behaviour, thoughts and action which could be observed in the participant.	
5.1 Achiever	1, 2, 3, 5, 8
5.1 Hospitable	2, 3, 5
5.2 Resilient	3, 5
5.3 Impatient	5
5.4 Social	2, 3, 4, 5, 6
5.5 Not rigid/flexible	1, 3, 4, 5, 6
5.6 Emotionally involved, dependent	1, 5, 6, 7, 8
5.7 Extravert	1, 4, 7
<b>Category B: DEVELOPMENTAL PERSPECTIVE</b>	
Acquired through life processes and can change over the life span.	
<b>Theme 6: Adaptation</b>	
Data included are instances or situations where the participant indicated a transition process.	
6.1 Fitting in	1, 2, 5, 7
6.2 Work role	1, 2, 5, 6
6.3 Work content	1, 3, 4, 5, 6, 7, 8
6.4 Career path	1, 2, 6

6.5 Relationships	1, 2, 5, 6, 7, 8
6.6 Further studies	1, 6, 8
<b>Theme 7: Challenges</b> Data included which was referred to as demanding.	
7.1 Lack of confidence	1, 6, 7
7.2 Academic work	1, 5, 6, 8
7.3 Emotional control	3, 5, 7, 8
<b>Theme 8: Coping mechanisms</b> Data which referred to strategies to adapt to contextual difficulty that brings comfort.	
8.1 Music listening	5, 8
8.2 Learn by doing	1, 2, 3, 4
8.3 Counselling	1, 5, 6, 7
<b>Category C: DYNAMIC PERSPECTIVE</b> Motivators that bring meaning and purpose.	
<b>Theme 9: Pre-occupations</b> Data that refer to absorbing thoughts in the participant.	
9.1 Failure	1, 5, 7, 8
9.2 Success	5, 7
9.3 Disappointment of others	5, 7, 8
<b>Theme 10: Aspirations</b> Data that refer to the hopes of the participant for certain achievements.	
10.1 Financial freedom	1, 3, 8
10.2 Technical expert	1, 3, 5, 6, 8
10.3 Inspirational leader	1, 3, 5, 8
<b>Theme 11: Work setting</b> Data which refer to indications of the desired work environment for the participant.	
11.1 Hands-on, technical problem solving activities	1, 3, 4, 5, 8
<b>Theme 12: Script</b> Data which refers to his life plan which the participant wants to satisfy.	
12.1 Personal development	1, 3, 4, 5, 8
12.2 Help others to grow	1, 5, 8
<b>Theme 13: Self advice</b> Personal recommendations which guide the participant.	
13.1 Concerning people, work, life	1, 5, 8

#### 4.15 SESSION 9: CONCLUDING INTERVIEW

In the concluding session we revisited the reasons George wanted to take on this self-discovery process. Each of the matters mentioned in the introductory session was revisited. The following paragraphs will briefly report back on the way George decided to go/ take action from here.

##### 4.15.1 Fitting in

Looking over the period of five months since getting to know George better, it was rewarding to be able to have such an open and relaxed conversation. Many things changed since his first visit. When I asked him about how he sees himself fitting into the company, it was clear



that ‘fitting-in’ was not much of an issue any more due his change from the technical division to the engineering division where he was a clear fit. Being true to his nature always pushing for growth and development, he made comments on how he plans to create more conversations with his engineering colleagues by trying to have them join in on a once a week luncheon together at a pub close-by. George also commented on the absence of practical, hands-on projects which he would prefer to be involved with. The current job requires quite a lot of paperwork which he is not too fond of. He is well aware that he still has a lot to learn in his capacity as ‘candidate process engineer’. George is aware of the fact that he needs to work really hard to learn as much as he can from the company. He also knows that he should use the opportunities he has to build his experience base to be employable.

#### **4.15.2 Further studies**

George wanted to explore what studies he could undertake and when would be the best time for him to pursue that. Having some experience in an engineering capacity and experiencing how draining an intellectually challenging work day can be, George realised that he should maybe wait and settle in before he started with further studies. He is interested in doing a masters’ degree either in Engineering management (MEM) or Project management (MPM) and he needs three years working experience before he can apply. George also considered business studies because of his interest in business and finance. He decided against going into business and finance completely due to the lack of people contact and the fact that jobs in finance are office bound. George grasped his interest in management as linked to his ambition to help others grow and develop.

#### **4.15.3 Future career path**

George decided that he wanted to work and stay in Gauteng in future and planned on exploring options to apply at other companies soon. As mentioned previously he is in a stable relationship with his girlfriend and considers getting married in the years to come. There are no work opportunities for his girlfriend in his current town. He comments about his current town as ‘... it does not feel like home’. George plans to stay at the company for the next 12-18 months and then to move on. He also realised that the engineers he works with often leave after three to five years due to the lack of designing projects the company has to offer. He realised the value of being patient and attentive of your environment.

#### **4.15.4 Lack of confidence**

George realised that the areas where he lacks confidence can be related to previous events or situations where he felt that he didn’t have what it took or where he failed. He could relate these

situations back to having to prove himself on a physical level to distinguish himself from his peer group. Another area where he sometimes lacked confidence is on an academic level. He plans on mastering his perception of academic failure by furthering his studies in about three to four years' time. George already proved himself to be an excellent employee. He recently received a letter of appreciation and gratification from his line manager for being an asset to the company due to his ability to fit in with others and for having an excellent attitude.

#### **4.15.5 LITERATURE CONTROL**

Identified themes will normally crystallise in a combination of three ways. Crystallised themes will either (a) confirm findings in the literature, (b) refute those findings or (c), by way of new insights which make a contribution to the literature. Marshall and Rossman (1995) claim that an important function of literature control is the identification of shortcomings in the available literature so that the researcher could indicate the extent to which the study addresses these shortcomings. According to Wisker (2001), researchers should familiarise themselves with what has been written by others. Literature control enables researchers to stay abreast of developments in a particular field or subject.

In the next section, I will focus on several salient aspects of the practice and theory of career counselling for literature control purposes. Given the scope of my study, this section will be very brief.

#### **4.15.6 Findings from my case study that confirm literature**

##### **4.15.6.1 Multiple levels**

Career counsellors are often requested to conduct career counselling in a linear way (Maree, 2013). We are often asked to provide life determining answers to clients which seem on the surface, but career issues 'have to be interpreted in terms of the larger pattern of clients' lives' (Maree, 2013, p. 63). By reading the article, *What do we know when we know a person?* (McAdams, 1995) at the very beginning of this study, which was one of the articles to inspire Mark Savickas to formulate the Career Construction Theory (Savickas, 2005), I realised the value of working on more than one level when I administer career counselling. McAdams promoted that psychologists not only work on a decontextualised level where 'traits' are allocated to describe personality but to also tend to the developmental level s contextualised by time, place and roles. The third or dynamic level (Savickas, 2005) explores the identity of a person as an 'internalised and evolving life story' (McAdams, 1995). Career counsellors cannot work in a linear way. Together with the client they need to facilitate their search for meaning. My study confirmed the potential value of working on the differential, developmental and dynamic levels as described in

the Career Construction Theory (CCT) (Savickas, 2005). The approach not only personalised the career intervention but grounded the intervention in the roots of who George is, informing and assisting him to make decisions about his future.

#### **4.15.6.2 Narrative approach**

Another theoretical aspect confirmed through my study is the significance of using narrative techniques or a storied approach in career counselling. The dynamic facets which are the third category in the thematic analysis containing the preoccupations and aspirations, were revealed through using narrative techniques such as the *Career Interest Profile* (Maree, 2010), Early Recollections Technique (Maree, 2010) and the Career Construction Interview (Savickas & Hartung, 2012). These techniques (grounded in the Career Construction Theory (Savickas, 2005, Savickas 2011) refer to the capacity of humans to be conscious of their own consciousness and using language to reflect on their own thinking to build the self. Once these career motives were revealed it was clear to George in my case study where his future career was heading. It impacted on him being able to design a meaningful life and career which await him. When I went back to the introductory interview, I realised the initial motive behind his request to make use of career counselling services. The narrative approach therefore brought richness, meaningfulness and depth to this case study.

#### **4.15.6.3 Blended approach**

My study confirmed the value of using a multiple or mixed methods approach in career counselling. In my case study, George is an engineer and I could see that he also appreciated the quantitative formal assessments where he could interpret numbers to be able to come to a conclusion, for example in the *Self Directed Search* (Gevers, Du Toit & Harilall, 1994) and the *Myers Briggs Type Indicator* (Briggs and Briggs Myers, 1994) regarding interest and personality. He commented specifically on the meaningfulness of understanding himself better created by the narrative assessments such as the *Career Interest Profile* (Maree, 2010) and the Career Construction Interview (Savickas & Hartung, 2011). There was a significant overlap in the qualitative and quantitative data which confirmed the findings.

#### **4.15.6.4 Meta-reflection**

‘Clients are regarded as the sole sources of reliable, valid and trustworthy information about themselves’ (Maree, 2013, p. 77). This case study confirmed the significance of this quote as it enabled a young person at the beginning of his working life to take responsibility and allowing himself to create his life according to his own insights. George spoke about a previous encounter with a career counsellor when he was still at school who advised him to not ever work

with people. He recalls listening to this information and realising that it was all wrong but did not have the opportunity to verify or challenge the ‘findings’. This case study confirmed the value of meta-reflection. After administering the *Career Interest Profile (CIP)* (Maree, 2010), the information seemed overwhelming to George. In the follow-up session the information gathered through the *CIP* (Maree, 2010) was used and George had to create his personal vision statements into the format of the Career Construction Interview provided by Savickas and Hartung. I realised the value for him of having another opportunity to process and ‘package’ the information formulating his own future aspirations in his own words.

#### **4.15.6.5 Only child, an achiever**

Adler (1931) linked birth order or birth positions of children in a family to influence their personal development. He mentions that oldest and only children have their parents all to themselves for some period at the beginning of their lives influencing their early development. According to Adler only and oldest children tend to have a high achievement drive. Only children are never dethroned by another sibling and they always remain the centre of the adult world. As was seen in the thematic analysis of my case study, George has been an achiever since a very young age. He was an excellent swimmer, did well at school and is a natural leader. George has a strong need to win when he participates in sports activities. Currently at work he is constantly strategising on how to get ahead and what he should do to distinguish himself from others as he strives to be an expert in some technical field. The theory of Adler regarding high drives for achievement in only children is confirmed in this case study.

#### **4.15.6.6 Using multiple modes of narrative assessment**

In this case study I used several narrative techniques to obtain the richest possible data to develop the sense of self of my participant. I also used quantitative assessments to confirm and add to the findings. Once the thematic analysis was completed I wanted to determine which of the assessments were effective to retrieve in-depth knowledge of the participant over the range of knowledge in the three categories according to the Career Construction theory (CCT). I then tabulated the contribution of each assessment against the themes and sub-themes (see **Table 4.14**)

**Table 4.14:** Contribution of different assessments to themes and sub-themes

	SESSIONS										
	1	2	3	3	4	5	5	6	6	7	8
	Intro interview	Collage	SDS	Genogram	MBTI	CIP	Life chapters	EQ-i	CAAS	ERT	CCI
Contribution to themes, sub-themes	54	25	22	9	15	66	7	11	8	16	27

(See ANNEXURE E for a more comprehensive list)

The *Career Interest Profile (CIP)* (Maree, 2010) as it was used in this study, provided the widest range of data on the differential, developmental and dynamic levels (also see ANNEXURE E). As discussed previously, the *CIP* is a narrative assessment instrument. I strongly believe, as much literature on the topic confirms (Savickas, 2005, 2009; Hartung, 2007, Maree, 2007, 2009, 2012b) that narrative techniques are essential in career counselling. I also acknowledge the value of the training and experience of the career counsellor in the use of qualitative assessments and realised that as an emerging psychologist there is so much to learn.

#### 4.15.7 Findings from my study that refute literature

Millar (2011) claims that engineering graduates generally lack broader professional success skills due to the fact that they are only well educated in engineering theory and fundamentals. My study refutes this statement somewhat. Realising only too well that this is an extremely limited case study and the participant could be an exception, the participant nonetheless appears to be an example of an engineer with sound people skills. George is an example of an engineer who knows himself slightly because of previous counselling. George also exposed skills to adapt to his workplace by respecting others and in drawing on his high levels of emotional and social intelligence.

#### 4.15.8 Findings from my study that contribute to literature

##### 4.15.8.1 Professional development of engineers

Walther and Radcliffe (2007) introduced the multi-scale systems model of engineering competence which was discussed previously. As illustrated by their model, individual elements such personal motives, self-perception and self-efficacy of young engineers often determine whether the knowledge gained and attributes honed in undergraduate years will come to fruition in broader society.

I see the (albeit extremely limited) contribution of this study as a way to contribute to the development of young engineers to be more self-aware regarding career and personal motives for life, and to develop their sense of self as represented in the multi-scale systems model (Walter & Radcliffe, 2007). The case study illustrated *how* an individual could possibly develop his or her sense of self in order to translate his or her skills into society. From this intervention George gained knowledge of his special abilities, he obtained more insight into the influence his family had on his career, he knows more about his interests, personality traits and he formulated his values. After the intervention, George admitted and showed an increased willingness to deal with current challenges, displayed enhanced adaptability strategies and had a greater understanding of the coping mechanisms he developed during the intervention. George confirmed his current preoccupations and aspirations, formulated his preferred work setting, realised his life script and voiced increased insight and advice to himself.

His self-insight has the potential to equip George (as advocated in Walther & Radcliffe, 2007) to add his talents and skills to contribute widely in his community. This is confirmed by George's success formula for himself as formulated in the Career Construction Interview (Savickas & Hartung, 2012):

I will be most happy and successful when I am able to be financially free and technically strong in places where people do hands-on, technical problem solving activities so that I can grow and eventually have a good understanding of that environment and *allow other people to grow in themselves.*

#### **4.15.8.2 Outline of essential information for career cases**

A second contribution of my case study lies in the presentation of the identified themes in the categories as depicted in

Table **4.15**. As an emerging educational psychologist with a passion for career psychology, I always wanted a framework that contains the essential information, in order to facilitate effective and state of the art career counselling. This need was also expressed in the multidimensional model of the Career Construction Theory (CCT) (Hartung, 2010) and its established body of knowledge. The utilisation of the CCT model and its associated meaning underlying the three categories and accompanying themes provides a practical framework containing the essential information psychologists might need to obtain from clients to provide a meaningful service. Savickas (2011) distinguishes between *vocational guidance*, *career education* and *career counselling*. I intend to use this outline as a guide for taking clients from being actors (vocational

guidance) and agents (career education) to become authors (career counselling) of their own lives. The exact manner the themes can potentially be packaged was not found in previous literature.

**Table 4.15:** Outline of essential information for career cases

Categories	Themes
Differential facets	Abilities
	Family background
	Interests
	Personal traits
	Values
Developmental facets	Adaptive accomplishment
	Challenges
	Coping mechanisms
Dynamic facets	Aspirations
	Pre-occupations
	Preferred work setting
	Life script
	Self-advice

#### 4.16 SUMMARY

This chapter presented the main results and specific findings obtained through my study. My study confirmed some findings from literature and hopefully contributed to the life of the young engineer, George. The next chapter will place emphasis on recommendations and on the conclusion of my study.

## CHAPTER 5

### SUMMARY AND RECOMMENDATIONS

#### 5.1 INTRODUCTION

This study was set up to explore the use of a narrative approach to develop the sense of self of a young engineer. It aimed to develop the sense of self of an engineer in his first employed year to enable him to constructively manage and direct his future career while dealing with the transition from being a student to an employee.

In this chapter I firstly provide a brief overview of the previous four chapters. Thereafter I address the research questions with mention of the identified limitations of the study. A discussion of the ethical aspects follows and finally possible recommendations for research and practice are suggested. The following paragraphs provide a brief overview of each chapter.

#### 5.2 OVERVIEW OF THE CHAPTERS

##### 5.2.1 Chapter 1: Introductory orientation

In order to provide a holistic view on the research topic, namely ‘*Using a narrative approach to develop the sense of self of a young engineer*’, I firstly aimed to contextualise and explain the relevance of my study. I then gave an overview on how the world of work has changed from the previous century with a discussion on the impact these complexities have on career counsellors’ practice and training. I touched on the professional development of engineers and their contribution to broader society followed by the rationale and purpose of my study.

The primary and secondary research questions were stated followed by a section which clarified key concepts in the study. After a discussion on the theoretical and conceptual frameworks, the paradigms and research design were addressed. The methods for the collection of data and its analysis were then described followed by an overview on the quality assurance strategies and ethical considerations relevant in the study. I concluded the chapter by mentioning the topics for each consecutive chapter of the study.

##### 5.2.2 Chapter 2: Literature review

In Chapter 2 I discussed the main themes of my study. I introduced the trends which had a significant influence on the global and South African labour markets. The study was then contextualised by a discussion on engineering in general and the professional development of engineers in particular. The implication of *sense of self* and the meaning of a narrative approach were then defined and explored. I discussed the Career Construction Theory (CCT) which forms



the foundation and theoretical framework of my study. Career counselling and career intervention in the 21<sup>st</sup> century were then discussed as embedded constructs in the overarching CCT. I concluded the chapter by discussing employability, adaptability, emotional and social intelligence and lifelong learning as the goals for 21<sup>st</sup> century career interventions (Savickas, 2011).

### **5.2.3 Chapter 3: Research design and methodology**

In Chapter 3 I discussed the interpretive/constructivist paradigm as well as the postmodern, qualitative and narrative research design implemented. The research design was described as an explorative case study utilising multiple methods to collect and analyse data. The criteria for the selection of a suitable research participant were listed followed by the data collection plan with discussions on each assessment method and technique used to explore the sense of self of the participant. I then discussed the inductive analysis design and elaborated on strategies for quality assurance. Finally the ethical considerations that would guide the complete study were described.

### **5.2.4 Chapter 4: Research results**

In Chapter 4 I first provided relevant background information of the participant. Discussions of the different sessions and assessments used in each session were followed by the themes and sub-themes that emerged in every session. I then gave an overall summary of the themes and sub-themes according to the three perspectives in the Career Construction Theory (CCT). The concluding session was discussed addressing the initial enquiry of the participant for seeking career counselling services. I concluded the chapter with a section linking the results of my case study to existing literature.

## **5.3 ANSWERING THE GENERAL RESEARCH QUESTION**

The multiple methods and explorative nature of this case study contributed to the acquisition of comprehensive information to investigate the main research enquiry, namely: ‘How can a narrative approach be utilised to develop the sense of self of a young engineer’. To support the conclusion to the primary question, the secondary questions will firstly be addressed.

### **5.3.1 What are the essential aspects of a narrative approach?**

The essential aspects of a narrative approach to career counselling were discussed in the literature review (see Chapter 2, Section 1.7). Narrative career counselling in particular was discussed in Chapter 2, Section 2.1.5. Engaging with the participant using an open attitude toward his context, beliefs and person created a space in which he could talk, express and share his life stories (as confirmed by Barresi & Jukes, 1997). As mentioned previously narrative career counselling is about ‘*a relational, conversational encounter during which learning and growth*

*occur through storytelling*' (Savickas, 2011, p. 41). The life story becomes a container or vehicle which holds the self in spite of changing circumstances and contexts.

To make meaning of life (Chen, 2007) is at the core of the narrative approach. Recurring patterns formed identifiable themes that indicated life purpose, meaning, and direction (Hartung, 2007). Gaining insight into his major life themes provided meaning in George's life. He reflected in his own words: 'It was interesting to see how certain patterns repeat themselves during my life and all the different areas where I can find these patterns'.

The participant is seen as the expert on his own life and his reflection after Session 5 (in which the *Career Interest Profile* (Maree, 2010) was administered) is quite telling/revealing: 'I feel that this session was one of the more rewarding sessions we had into the issue of where am I and where am I going. It really added a lot to my thought processes and explained why some issues hits harder than others'.

### **5.3.2 What does the sense of self of a young engineer entail?**

The essence of the sense of self of the young engineer who participated in my study is represented by the themes and sub-themes that emerged during the intervention sessions. The summary of the themes and sub-themes are discussed in Chapter 4, Section 4.14. A detailed overview on the categories, themes and sub-themes with responses from the participant can be viewed in ANNEXURE C.

### **5.3.3 What is the influence of a narrative approach to career counselling intervention on the sense of self of a young engineer?**

The influence of a narrative approach to career counselling intervention on the sense of self of a young engineer was described in Chapter 4, Section 4.16.3. George gained knowledge of his special abilities, he obtained more insight into the influence his family had on his career, he knows more about his interests, personality traits and he formulated his values. After the intervention, George admitted and showed an increased willingness to deal with current challenges, displayed enhanced adaptability strategies and understood more about the coping mechanisms he had developed during the intervention. George confirmed his current preoccupations and aspirations, formulated his preferred work setting, realised his life script and voiced increased insight and advice to himself.

### **5.3.4 How can a narrative approach be utilised to develop the sense of self of a young engineer?**

The primary question is addressed through the secondary questions as set out in the previous paragraphs. I believe that this study provided some guidelines on how the sense of self of a young engineer could be developed. However, I fully realise that there are multiple other ways apart from the narrative methods and procedures used in this study to develop the sense of self of a young engineer.

The participant actively took part in this process and became the author (Savickas, 2011) of the process himself. George visualised and anticipated a meaningful life and career from the present place he occupies in his life span. The process of narrative career counselling brought about transformation (Savickas, 2011) and readiness to move. Similar findings were confirmed by Di Fabio and Maree (2012, p. 106): ‘...the value of a qualitative [narrative] approach to career counseling [lies] in facilitating [a] better understanding of the value of meaning-making, personal agency, personal growth and (co-) construction of meaning and acceptance of personal responsibility in the career counselling process’.

## **5.4 LIMITATIONS OF THE STUDY**

Limitations to the study are found in the scope and nature of the research design. A narrative explorative case study is limited in its scope because only a single person participated. Findings can therefore not be generalised to the larger population of engineers.

Quality assurance criteria were put in place to enhance the credibility and dependability of the study, but the subjectivity of my role as researcher needs to be taken into account. Another researcher could indeed interpret the findings in a different way.

## **5.5 ETHICAL ASPECTS**

Various criteria were put in place to protect the participant. The participant signed a personal consent form accepting voluntary participation and he was given the authority to withdraw from the project at any stage he wanted to. Pseudonyms were used to protect the identity of the participant and significant others in the report or in the raw data. Other information which could lead to the identification of the participant was removed. Through the course of the study I subjected myself to the ethical code of the *Health Professions Council of South Africa (HPCSA)*.

Measures were put in place to ensure the quality of the findings. I continually gave feedback to the participant in order to verify the accuracy of the information gathered. An external coder verified the themes and sub-themes of my study to augment the credibility and dependability of the findings. I used appropriate research methods and held high methodological

standards throughout the study. The research findings were reported in an accurate and responsible manner.

## 5.6 RECOMMENDATIONS

A similar approach to the one applied in this study can be used to prepare final year engineering students for the transitions that await them once they are in industry. Such an intervention would ideally need to be presented in a slightly different way to accommodate a group in order to reach more students simultaneously. Di Fabio & Maree (2012) previously successfully conducted career construction group interventions in an Italian context by using the principles in the Career Construction Interview (Savickas & Hartung, 2011). A South African study in an engineering context could make contributions to research and could also inform future career psychology practice.

## 5.7 PERSONAL LEARNING

I briefly want to highlight personal knowledge obtained through my research study. I have found the impact of a storied or narrative approach more valuable than previously thought and I gained renewed confidence in the Career Construction Theory (Savickas, 2005, 2009) for application in counselling practice. Through the case study I gained renewed appreciation for the value of professional assistance in transition phases of a client's life and I gained counselling experience by listening to the audio recordings of the sessions although some steps in the process also taught me what not to do! I came to appreciate the significance of work in our lives and the role of careers as the carrier and container of meaning (Maree, 2010).

## 5.8 CONCLUSION

In this study, a narrative approach to career counselling was used to develop the sense of self of a young engineer. The findings were critically investigated on the basis of a multiple method case study as described. Quantitative findings confirmed the qualitative findings. The case study provides only one example of how narrative techniques can be used as a strategy to develop the sense of self of a young engineer to effectively facilitate a challenging life transition period. I want to confirm and agree with Maree (2010, p. 353): 'The value of qualitative [narrative] approaches is accepted as a *fait accompli* [in the 21<sup>st</sup> century].'

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## ANNEXURE A: Informed consent letter



UNIVERSITEIT VAN PRETORIA  
UNIVERSITY OF PRETORIA  
YUNIBESITHI YA PRETORIA  
Faculty of Education

Dear Participant

### REQUEST FOR INFORMED CONSENT

Thank you very much for your willingness to participate in this research project. This project will be conducted as part of the completion of a Master's degree in Educational Psychology at the University of Pretoria. The purpose of the study is to use a narrative approach to develop the sense of self of a young engineer.

In order for you to make an informed decision before we start this journey together, I wish to inform you of the requirements expected from you during this process. You will be asked to commit to nine contact sessions of between one and three hours per session. The sessions will be scheduled with you at appropriate times to suit your program. Attendance and participation of these sessions promise to provide you with rich knowledge and insight of yourself and promise to assist and guide your future career in a meaningful way.

The following ethical principles apply to this study.

- Your participation is voluntary.
- You may withdraw from the project at any stage should you wish so.
- Information you provide will be treated as confidential and anonymous.
- The intent of this study is to cause you no harm or risk of any kind.
- In the report following this study no reference will be made to information that could convey personal or identifiable information.
- You have the right to gain access to any information that was collected during the research process at any time.
- You have the right to withdraw any data and information you wish not to be released for publication.

The findings of this study may be published in an accredited research journal, but confidentiality and anonymity will be honoured.

You will be required to complete the following formal assessments:

- *Myers-Briggs Type Inventory (MBTI)*
- *Self-Directed Search (SDS)*
- *Emotional Quotient Inventory (EQ-i).*
- *Career Adapt-Adaptabilities Inventory (CAAS)*
- *Career Interest Profile (CIP)*

You will be requested to take part in the following narrative techniques:

- *Collage*
- Career genogram
- Life chapters technique
- *Career Construction Interview (CCI)*
- Informal interviews and reflective feedback notes.

The planned sessions will be audio- and/or video-recorded for research purposes. The results of these sessions will be submitted to the University of Pretoria in the form of a dissertation for me to fulfil the requirements for the Master's degree in Educational Psychology.

By signing this letter of informed consent you are giving permission for the following sources of data to be released (kindly indicate your agreement to each statement by ticking in front of the appropriate statement, e.g. )

- The verbatim transcription of the content as recorded during the sessions
- The analysis, interpretation and reporting of the content discussed during the sessions
- Notes and reflections made by the researcher and participant throughout the research process

If you have any queries before or during the study or maybe after its completion, you are welcome to contact my supervisor, Prof. Kobus Maree (012 420 2130) or myself (0721412905).

Yours sincerely

---

Erna Gerryts



ANNEXURE B: *Collage*





**ANNEXURE C: Data with categories, themes, subthemes, inclusion and exclusion criteria with participant responses**

<b>Category A: DIFFERENTIAL PERSPECTIVE</b>		
Imbedded content within the individual with stable probabilities.		
<b>Theme 1: Family background</b>		
Family background relates to relevant facts regarding the participant's family which is inherent in the sense of self of the participant.		
<b>Subthemes</b>	<b>Inclusion criteria</b>	<b>Exclusion criteria</b>
1.1 Only child	Phrases, sentences and words which refer to the participant's position in the family.	Phrases, sentences and words which do not refer to the participant's position in the family.
<b>Example of participant's responses: (1, 3)<sup>11</sup></b> <i>'My pa en ma was 15 jaar getroud voordat ek gebore is, Ek het alleen grootgeword ...'</i> [My mom and dad were married for 15 years before I was born. I was raised on my own ...]		
1.2 Supportive parents	Phrases, sentences and words which refer to the fact that the participant has supportive parents.	Phrases, sentences and words which do not refer to the participant's parents as being supportive of him.
<b>Example of participant's responses: (1, 2, 3)</b> <i>'My ma was baie 'backing gewees ...en my pa het net vir my gesê ek moet net aanhou ...'</i> [My mom was very supportive ... and my dad always told me just to keep on ...]		
1.3 First generation graduate	Phrases, sentences and words which refer to the fact that the participant is the first person in three generations who has an academic degree.	Phrases, sentences and words which do not refer to the fact that the participant is the first person who has an academic degree in three generations.
<b>Example of participant's responses: (1, 3)</b> <i>'Ek dink nie een van die familie wat ek ken het 'n graad nie ...'</i> [I don't think any of the family that I know has a degree ...]		
<b>Theme 2: Values</b>		
Values relate to the judgement of the participant of what is important in his life.		
<b>Subthemes</b>	<b>Inclusion criteria</b>	<b>Exclusion criteria</b>
2.1 Achievements	Phrases, sentences and words which refer to the significance of achievements for the participant.	Phrases, sentences and words which do not refer to the significance of achievement for the participant.
<b>Examples of participant's responses: (1, 5, 7)</b> <i>'... 'achievement' is nou vir my belangrik, want ek het agtergekom deur achievements jy verder kan kom in die besigheid'</i> [... achievement is currently important to me because I realised that you can get further in the business through achievements]		
2.2 Money	Phrases, sentences and words which refer to the significance of money for the participant.	Phrases, sentences and words which do not refer to the significance of money for the participant.

<sup>11</sup> Content per session: 1: Introductory session; 2: Collage; 3: Genogram & SDS; 4: MBTI; 5: CIP & Life chapters; 6: CAAS & EQ-i; 7: ERT; 8: CCI.

	<p><b>Examples of participant's responses: (1, 5)</b>  <i>'Geld is redelik belangrik vir my nou ... [my beleggingsfondse] ... ek wil hulle so vinnig moontlik ... kry dat mens nie regtig meer hoef te 'worry' nie', '... om ...finansiele vryheid te hê ...'</i>            [Money is now fairly important for me ...(my investment funds) ... I want to as soon as possible ... get them that one don't really have to worry anymore][... to have financial freedom ...]</p>	
2.3 Relationships	Phrases, sentences and words which refer to the significance of relationships for the participant.	Phrases, sentences and words which do not refer to the significance of relationships for the participant.
	<p><b>Examples of participant's responses: (1, 3, 5)</b>  <i>'Verhoudings is nog steeds [belangrik] ... verhoudings by die werk, my en [meisie] se verhouding, my vriende wat ek nou nie meer baie sien nie- daardie verhoudings'</i>            [Relationships are still important ... relationships at work and the relationship with my girlfriend, my friends that I don't see often anymore-those relationships]</p>	
2.4 Ethical and spiritual principles	Phrases, sentences and words which refer to the significance of ethical and spiritual principles for the participant.	Phrases, sentences and words which do not refer to the significance of ethical and spiritual principles for the participant.
	<p><b>Examples of participant's responses: (1, 2, 5, 8)</b>  <i>'Dit gaan baie oor jou menswees- om die regte goeters te doen', 'Ek is grootgedoop in my vierdejaar wat ook vir my 'n goeie ding was ...', '...dis eers as jy eendag dood is om te dink wat los jy agter ...'</i>            [It is much about your being as a person-do do what is right], [I was baptised in my fourth years which was good for me ...], [...it is only when you die one day-what legacy do you leave behind ...]</p>	
<p><b>Theme 3: Abilities</b>            Abilities relate to proven skills that the participant portrays which identifies parts of his sense of self.</p>		
<b>Subthemes</b>	<b>Inclusion criteria</b>	<b>Exclusion criteria</b>
3.1 Swimming champion	Phrases, sentences and words which refer to the participant's swimming career.	Phrases, sentences and words which do not refer to the participant's swimming career.
	<p><b>Examples of participant's responses: (1, 2, 5)</b>  <i>'... ek het in my matriekjaar die 200m en 400m SA's gewen', '...ek het geswem en dis wat ek gedoen het en ek het "geswot"'</i>            [...I won the 200 and 400 meter SA championships], [...I swam and that was all that I did and I also studied]</p>	
3.2 Leader	Phrases, sentences and words which refer to leadership positions the participant fulfilled.	Phrases, sentences and words which do not refer to leadership positions the participant fulfilled.
	<p><b>Examples of participant's responses: (1, 2, 3, 5)</b>  <i>'Ek was in die laerskool en hoërskool onderhoofseun ... kaptein van die [provinsie] swemspan, ... na skool was dit ... huiskomitee in [koshuis]'</i>            [I was deputy head boy in primary school and in high school ... captain of the (province name) swimming team ... after school it was ... house committee member in (residence name)]</p>	
3.3 Chemical engineer	Phrases, sentences and words which refer to the profession of the participant.	Phrases, sentences and words which do not refer to the participant's profession.

	<p><b>Examples of participant's responses: (1, 2, 5)</b>  <i>'... en dit is wat ek is [ 'n chemise ingenieur] officially. Ek het my papiere ...', 'Ek dink ek het nou actually identiteit-die feit dat ek 'n prosesingenieur is by [maatskappy].</i>  <i>[... and that is what I am (a chemical engineer) officially. I have the papers ...], [I think I actually have identity now-the fact that I am a process engineer at (company name)]</i></p>	
3.4 Problem solver	Phrases, sentences and words which refer to the participant's interest in solving problems in his technical field of expertise.	Phrases, sentences and words which do not refer to the participant's interest in solving problems in his technical field of expertise.
	<p><b>Examples of participant's responses: (2, 3, 4, 5, 6, 8)</b>  <i>'Wat baie aandag van my vat is ... probleemoplossing ... uitsorteer of oplos...'</i>  <i>[What takes a lot of my attention is ... problem solving ... to sort it out or find solutions]</i></p>	
3.5 People skills	Phrases, sentences and words which refer to the skill of the participant to relate to people in the workplace.	Phrases, sentences and words which do not refer to the skill of the participant to relate to people in the workplace.
	<p><b>Examples of participant's responses: (1, 2, 3, 4, 5, 6, 8)</b>  <i>'... dit hang maar alles af hoe jy ... mense 'approach', 'Ek het toe agtergekom ouens begin met my kom praat oor goeters ...', '... dis maklik om my te vertrou'</i>  <i>[... it all depends on how you ... approach people], [I started to realise that guys started to chat with me about matters ...], [...it is easy to trust me]</i></p>	
<p><b>Theme 4: Interest</b>  Interest relates to topics that excites the attention and curiosity of the participant</p>		
<b>Subthemes</b>	<b>Inclusion criteria</b>	<b>Exclusion criteria</b>
4.1 Business, entrepreneurial	Phrases, sentences and words which refer to the participant's interest in business and financial acumen.	Phrases, sentences and words which do not refer to the participant's interest in business and financial acumen.
	<p><b>Examples of participant's responses (1, 2, 3, 4, 5)</b>  <i>'Ek wil myself bietjie beter 'equip in die besigheidswêreld', '... dit sal lekker wees om na hulle (bestuur) toe te te kan gaan en vir hulle te kan sê ... ek doen hierdie projek en ek spaar'</i>  <i>[I want to equip myself better for the business world], [...it would be nice to be able to go to them (management) and tell them ... I'm doing this project and I save]</i></p>	
4.2 Adventure and outdoors	Phrases, sentences and words which refer to the participant's interest in adventure sports, outdoors and nature.	Phrases, sentences and words which do not refer to the participant's interest in adventure sports, outdoors and nature.
	<p><b>Examples of participant's responses: (2)</b>  See collage in ANNEXURE B. The participant is involved in white water rafting, hiking, fishing, and diving. <i>'... passion vir Afrika ook ... om Mozambiek toe te gaan. Ek was al in Zimbabwe gewees'</i>  <i>[... passion for Africa too ... to go to Mozambique. I've been to Zimbabwe before]</i></p>	
4.3 Engineering, natural sciences	Phrases, sentences and words which refer to the participant's interest in natural sciences and engineering.	Phrases, sentences and words which do not refer to the participant's interest in natural sciences and engineering.

	<p><b>Examples of participant's responses: 3, 5</b> See <i>SDS</i> in Section 4.8.3 and CIP in Section 4.10. <i>'Ek dink ek het nou actually identiteit – die feit dat ek 'n prosesingenieur is by [company]'</i> [I think I actually have identity now-the fact that I am a process engineer in my company]</p>	
4.4 Executive management	Phrases, sentences and words which refer to the participant's interest in the management structure of his company and executive management.	Phrases, sentences and words which do not refer the participant's interest in the management structure of his company and executive management.
	<p><b>Examples of participant's responses: 1, 5</b> <i>'Ek sal nog eers bietjie kyk voordat ek sulke vrae begin vra oor die 'corporate'-struktuur. Dit sal lekker wees om daar in te gaan ...</i> [I wait a bit before I ask questions about the corporate structure. I would enjoy going into corporate ...]</p>	
4.5 Cooking	Phrases, sentences and words which refer to the participant's interest in cooking for and entertaining of others.	Phrases, sentences and words which do not refer to the participant's interest in cooking for and entertaining of others.
	<p><b>Examples of participant's responses:(2)</b> <i>'Ek hou baie van kosmaak', 'Ek hou van "entertain" en ek hou van sosialiseer'</i> [I love cooking], [I like to entertain and I like to socialise]</p>	
<p><b>Theme 5: Personal traits</b> Personal traits refer to habitual patterns of behaviour, thought and action which could be observed in the participant.</p>		
<b>Subthemes</b>	<b>Inclusion criteria</b>	<b>Exclusion criteria</b>
5.1 Hospitable	Phrases, sentences and words which refer to being hospitable toward others.	Phrases, sentences and words which do not refer to being hospitable toward others.
	<p><b>Examples of participant's responses: (2, 3, 5)</b> <i>'Ek dink ek het die vermoë om 'n rustige, gesellige, vriendelike atmosfeer te skep'</i> [I think I have the capability to create a peaceful, friendly atmosphere]</p>	
5.2 Resilient	Phrases, sentences and words which refer to the participant's recovery from difficult situations.	Phrases, sentences and words which do not refer to the participant's recovery from difficult situations.
	<p><b>Examples of participant's responses: (1, 3, 4)</b> <i>'Ek het begin ontspan akademies en vir myself gesê solank ek dit net maak op die einde ...'</i> [I started to relax academically and said to myself as long as I made it in the end]</p>	
5.3 Impatient	Phrases, sentences and words which refer to being intolerant in situations or with others.	Phrases, sentences and words which do not refer to the participant's intolerance in situations or with others.
	<p><b>Examples of participant's responses: (4)</b> <i>'Ek het ... die geneigdheid om ... ongeduldig te wees', 'Ek hou nie van sukkel nie ...', 'Ek is nogal ongeduldig op die pad', 'Ek is ook partykeer ongeduldig met [meisie] ook'</i> [I have ... the tendency to ... be impatient], [I do not like to struggle ...], [I am quite impatient in traffic], [I am also often impatient with my girlfriend]</p>	
5.4 Achiever	Phrases, sentences and words which refer to the tendency of being an achiever.	Phrases, sentences and words which do not refer to the tendency to achieve.

	<p><b>Examples of participant's responses: (1, 2, 3, 5, 8)</b>  <i>'... achievement is nou vir my belangrik, want ek het agtergekom deur achievements jy verder kan kom in die besigheid.'</i>          [... achievement is important to me now because I realised through achievements you can get further in the company]</p>	
5.5 Social, Extravert	Phrases, sentences and words which refer to how the participant is being perceived by others.	Phrases, sentences and words which do not refer to how the participant is being perceived by others.
	<p><b>Examples of participant's responses (2, 3, 4, 5, 6)</b>  <i>'... ek dink almal dink ek is redelik fun', 'Een van die ouens het ... vir my gesê ek moenie so skaars wees nie ...'</i>          [... I think everybody thinks I am quite fun], [One of the guys said to me I should not be so scarce with my time to visit him]</p>	
5.6 Emotionally involved, dependent	Phrases, sentences and words which refer to the fact that the participant's emotions are easily aroused.	Phrases, sentences and words which do not refer to the easy arousal of the participant's emotions.
	<p><b>Examples of participant's responses: (1, 5, 6, 7, 8)</b>  <i>'... vir my moeilik om ... die emosies net eenkant toe te skuif en half bietjie rationeel te dink oor dinge', 'Ek probeer dit "handle", maar in die situasie sukkel ek nog', '... nou die dag toe my hond siek geword het ... jy voel so half heeltemal, heeltemal magteloos ...'</i>          [... is difficult for me to ... just push the emotions aside to think rationally about things], [I'm trying to handle it but in the situation I still struggle], [... the other day when my dog was ill ... you feel so totally, totally helpless]</p>	
5.7 Not rigid / flexible	Phrases, sentences and words which refer to the participant as being open-minded, not rigid and flexible toward day to day situations.	Phrases, sentences and words which do not refer to the participant as being open-minded, not rigid and flexible toward day to day situations.
	<p><b>Examples of participant's responses: (1, 4)</b>  <i>'... redelik aanpasbaar in sosiale omgewings ...', '... elke dag kan maar gebeur soos hy wil ...'</i>          [... fairly adaptable in social situations ...], [... every day can happen as it may ...]</p>	
<p><b>Category B: DEVELOPMENTAL PERSPECTIVE</b>          Acquired through life processes and can change over the life span</p>		
<p><b>Theme 6: Adaptation</b>          Data included are instances or situations where the participant indicated a transition process.</p>		
<b>Subthemes</b>	<b>Inclusion criteria</b>	<b>Exclusion criteria</b>
6.1 History of complicated adaptation	Phrases, sentences and words which refer to previous difficulty adapting during a period of transition.	Phrases, sentences and words which do not refer to previous difficulty adapting during a period of transition.
	<p><b>Examples of participant's responses: (1, 2, 5, 7)</b>  <i>'Dis maar min of meer wat ek deurgegaan het in my tweedejaar toe ek van skool af hiernatoe [universiteit] toe gekom het ... het noutet weer begin gemaklik raak hier nou skuif ... [ek] weer'</i>          [It was more or less what I went through in my second year when I came from school to university ... I just started to become comfortable here and here I 'm moving again]</p>	
6.2 Fitting in	Phrases, sentences and words which refer to difficulty in adaptation in the new residence and town.	Phrases, sentences and words which do not refer to difficulty in adaptation in the new residence and town.

	<p><b>Examples of participant's responses: (1, 2, 5, 7)</b>  <i>'Ek sukkel nog bietjie om aan te pas in [dorp]', '... een van die redes hoekom ek bietjie omgekrap... is omdat MY mense nie daar is nie en ek nog nie regtig mense daar het nie'</i>            [I still struggle a bit to adapt in (name of town)], [... one of the reasons why I am a bit upset ... is because MY people are not there and I do not have other people there yet]</p>	
6.3 Work role	Phrases, sentences and words which refer to uncertainties regarding the participant's position and work role.	Phrases, sentences and words which do not refer to uncertainties regarding the participant's position and work role.
	<p><b>Examples of participant's responses (1, 2, 5, 6)</b>  <i>'Die [maatskappy] struktuur is baie groot en ek weet nie waar ek ... sal inpas nie'</i>            [The (company name) structure is very big and don't know where I ... would fit in]</p>	
6.4 Work content	Phrases, sentences and words which refer to frustration regarding the content of work in the company.	Phrases, sentences and words which do not refer to frustration regarding the content of work in the company.
	<p><b>Examples of participant's responses: (1, 3, 4, 5, 6, 7, 8)</b>  <i>'Dit is fisiese werk- glad nie ingenieurswerk nie', '... dis bietjie sielododend ...'</i>            [It is physical work-not at all engineering work], [... it is a bit boring, it kills my soul ...]</p>	
6.5 Career path	Phrases, sentences and words which refer to uncertainty regarding his future career path.	Phrases, sentences and words which refer to certainty regarding his career path.
	<p><b>Examples of participant's responses: (1, 2, 6)</b>  <i>'Ek sal maar sien ... ek weet nog nie lekker nie ... waar en wat nie ...', 'Ek is nie helemal seker waarheen nie, ek is nie helemal seker hoe nie'</i>            [I need to see ... I don't know well yet ... where and what ...], [I am not fully sure where to, I'm not sure how]</p>	
6.6 Relationships	Phrases, sentences and words which refer to changes in relationships because the participant is an employee and not a student anymore.	Phrases, sentences and words which do not refer to changes in relationships because the participant is an employee and not a student anymore.
	<p><b>Examples of participant's responses: (1, 2, 5, 6, 7, 8)</b>  <i>'Ek sien verhoudings kan nogal 'n 'challenge' wees as 'n mens werk en nie meer swot nie'</i>            [I see that relationships can be a challenge when you work and when you are not a student anymore]</p>	
6.7 Further studies	Phrases, sentences and words which refer to the participant's inclination to further his studies.	Phrases, sentences and words which do not refer to the participant's inclination to further his studies.
	<p><b>Examples of participant's responses: (1, 6, 8)</b>  <i>'Ek weet nie wat ek verder moet swot nie. Ek weet nie wat ek moet swot as ek verder wil swot nie'</i>            [I don't know what to study further. I don't know what to study if I decide to further my studies]</p>	
<p><b>Theme 7: Challenges</b>            Data included which was referred to as demanding.</p>		
<b>Subthemes</b>	<b>Inclusion criteria</b>	<b>Exclusion criteria</b>
7.1 Lack of confidence	Phrases, sentences and words which refer to a lack of confidence in work situations.	Phrases, sentences and words which do not refer to a lack of confidence in work situations.



	<p><b>Examples of participant's responses:(1, 6, 7)</b>  <i>'As ek ongemaklik is dan sukkel ek en kom ek baie skaam voor', 'Ek is nie regtig baie groot daarop om voor mense te praat nie... ek het baie min vrae gevra in die klas', '... ek sukkel in nuwe situasies met nuwe mense wat ek nie regtig ken nie ...', '... ek weet nie of is ek tegnies sterk genoeg om daardie probleem te kan oplos nie...'</i>            [If I am uncomfortable I struggle and tend to be very shy], [I am not big on speaking in front of others ... I asked minimal questions in class], [I struggle in new situations with new people whom I don't know], [... I don't know if I am technically strong enough to solve that problem ...]</p>	
7.2 Academic work	Phrases, sentences and words which refer to having difficulty with academic work.	Phrases, sentences and words which refer to not having difficulty with academic work.
	<p><b>Examples of participant's responses: (1, 5, 6, 8)</b>  <i>'Toe ek op universiteit kom het ek gedink dit gaan ... soos skool wees, maar dit was NIE so nie', '...ek het drie vakke gedruip... '[in die eerstejaar], 'Ek het begin ontspan akademies en vir myself gesê solank ek dit net maak op die einde ...', '... ek het dit [self-destruction]beleef met my studies toe goeters glad nie goed gegaan het nie ...', 'Daardie ding van "moet net nie vra wat ek swot en hoe lank ek swot nie" – daai goed is weg'</i>            [When I came to university I thought it will be like school but it wasn't like that], [...I failed three subjects (in first year)], [I started to calm down academically and said to myself as long as I make it in the end...], [I experienced self-destruction with my studies when things did not go that well ...], [That irritation of 'do not asked me what I study and for how long I've been studying'- that has passed]</p>	
7.3 Emotional control	Phrases, sentences and words which refer to having difficulty to control emotions.	Phrases, sentences and words which refer to not having difficulty to control emotions.
	<p><b>Examples of participant's responses: (3, 5, 7, 8)</b>  <i>'... ek het nogals 'n manier om te "self-destruct" ... Ek kry nie my gedagtes alles "aligned" nie'</i>            [... I sometimes have a way to self-destruct ... I then can't get my thoughts aligned]</p>	
<p><b>Theme 8: Coping mechanisms</b>            Data which referred to strategies to adapt to contextual difficulty that brings comfort.</p>		
<b>Subthemes</b>	<b>Inclusion criteria</b>	<b>Exclusion criteria</b>
8.1 Music listening	Phrases, sentences and words which refer to listening to music as coping mechanism.	Phrases, sentences and words which do not refer to listening to music as coping mechanism.
	<p><b>Examples of participant's responses: (5, 8)</b>  <i>'Kan my favourite quotation ook 'n liedjie wees?', 'Ek het maar baie musiek geluister ...', '... ek het baie musiek geluister daaroor [daarmee in gedagte]', '... ek luister weer bietjie te min musiek op die oomblik. Ek het ... al baie-ek wil nie sê "comfort" nie, maar ... dit si soos my area waar ek ander goed oordink ...'</i>            [Can my favourite quotation also be a song?], [I listened a lot to music ...], [... I listened to music a lot with this in mind], [... these days I don't listen to music enough. I got a lot of comfort (by listening to music) ... it is my place where I think about things]</p>	
8.2 Learn by doing	Phrases, sentences and words which refer to the fact that the participant learn new concepts by being involved and partaking or doing it	Phrases, sentences and words which do not refer to the fact that the participant learn new concepts by being involved and partaking or doing it
	<p><b>Examples of participant's responses: (1, 2, 3, 4)</b>  <i>'... hierdie is meer tegniese-fisiese werk ... ek geniet dit ...'</i>            [... this is more technical physical work ... I enjoy it ...]</p>	

8.3 Counselling	Phrases, sentences and words which refer to the participant's previous encounters in counselling situations.	Phrases, sentences and words which do not refer to the participant's previous encounters in counselling situations.
<p><b>Examples of participant's responses: (1, 4, 5)</b>  <i>'Toe gaan ek na [counsellor] toe en toe sê ek vir hom ... ek weet regtig nie waar ek inpas in [koshuis] nie', 'Hy het regtig baie vir my beteken ..', '... Ek het weer [counsellor] se "tools" gebruik ...As jy sleg voel ...dan gaan soek jy totdat jy weet en jy dit 'n naam kan gee'</i>            [I went to a counsellor and told him ... I really don't know where I fit in (residence)], [He really meant a lot to me ...], [...I again used the 'tools' the counsellor gave me ...If you feel bad ... start to seek until you can name it]</p>		
<p><b>Category C: DYNAMIC PERSPECTIVE</b> Motivators that bring meaning and purpose</p>		
<p><b>Theme 9: Pre-occupations</b> Data that refer to absorbing thoughts in the participant.</p>		
<b>Subthemes</b>	<b>Inclusion criteria</b>	<b>Exclusion criteria</b>
9.1 Failure	Phrases, sentences and words which refer to 'fall', 'failure' were included in the data.	Phrases, sentences and words which do not refer to 'fall' or 'failure' were not included.
<p><b>Examples of participant's responses: (1, 5, 7, 8)</b>            After failing three subjects: <i>'Toe het ek bietjie begin twyfel oor het ek dit wat hierdie graad verwag', [I started to doubt whether I have what this degree asks from me. Early recollections: 'val', '...toe dit nie goedgaan nie en toe ek nie heeltemal "succeed" nie was dit so 'n sneeubal effek ...', '... die feit dat ek nie [ingenieursgraad] in vier jaar klaargemaak het nie ...'</i>            ['fall'], [... when it didn't go well and when I did not quite succeeded it was like a snowball...], [... the fact that I did not finish my engineering degree in four years]</p>		
9.2 Disappointment of others	Phrases, sentences and words which refer to disappointing self or others.	Phrases, sentences and words which do not refer to disappointing self or others.
<p><b>Examples of participant's responses: (5, 7, 8)</b>  <i>'Ek wil nie regtig graag mense teleurstel nie', ; ... ek wil myself nie teleurstel nie', 'Ek wil nie sê ek wil voel ek wen die heelyd nie, maar ek wil net ... nie myself teleurstel nie'</i>            [I really don't want to disappoint people], [...I don't want to disappoint myself], [I don't want to say that I feel like winning all the time, but I just don't want to disappoint myself]</p>		
<p><b>Theme 10: Aspirations</b> Data that refer to the hopes of the participant for certain achievements.</p>		
<b>Subthemes</b>	<b>Inclusion criteria</b>	<b>Exclusion criteria</b>
10.1 Financial freedom	Phrases, sentences and words which refer to aspirations of the participant to be a financially free person.	Phrases, sentences and words which do not refer to aspirations of the participant to be a financially free person.
<p><b>Examples of participant's responses: (1, 3, 8)</b>  <i>'... om ... finansiële vryheid te hê ...', '...eintlik meer financial freedom'</i>            [...to be financially free ...], [...actually it is financial freedom]</p>		
10.2 Technical expert	Phrases, sentences and words which refer to working toward being in a position which differentiates the participant from others.	Phrases, sentences and words which do not refer to working toward being in a position which differentiates the participant from others.
<p><b>Examples of participant's responses: (1, 3, 5, 6, 8)</b>  <i>'Ek soek nog steeds na die een ding waarnatoe ek kan werk', '... ek soek maar nou daardie een ding waarmee ek wil hardloop', 'Net dat daar iets is wat my differensieer ...', 'Ek wil ... in ons groep bietjie meer uitstaan'</i>            [I'm still looking for the one thing I can work toward], [... I seeking that one thing with which I can run], [That there is one thing that would differentiate me ...], [I want ... to stand out in our group]</p>		

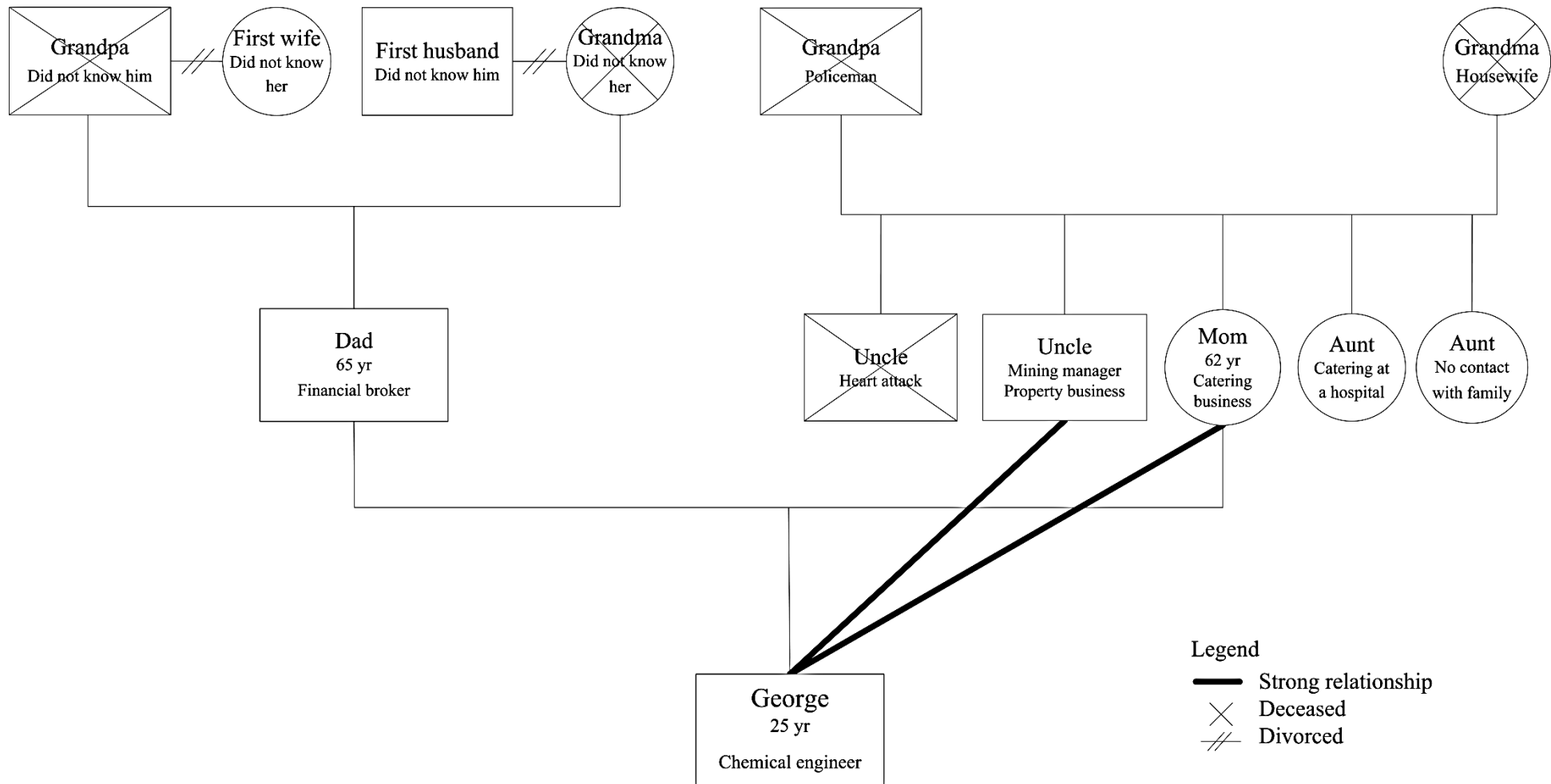


10.3 Inspirational leader	Phrases, sentences and words which refer to being in management and being able to win the loyalty of people.	Phrases, sentences and words which do not refer to being in management and being able to win the loyalty of people.  <b>Examples of participant's responses: (1, 3, 5, 8)</b> <i>'peoples person', 'n "emotional understanding"', '...inspirational leadership ...'...die "corporate" struktuur. Dit sal lekker wees om daar in te gaan ...'</i> [peoples person], [an emotional understanding], [... inspirational leadership ...], [... the corporate structure. I will enjoy it to work there ...]
<b>Theme 11: Work setting</b> Data which refer to indications of the desired work environment for the participant.		
<b>Subthemes</b>	<b>Inclusion criteria</b>	<b>Exclusion criteria</b>
11.1 Hands-on	Phrases, sentences and words which refer to practical involvement in the work place.  <b>Examples of participant's responses: (2)</b> <i>'...ek hou daarvan om dinge uit te werk en meer te implementeer. Soos half die projekbestuurskant daarvan'</i> [... I like to sort out things and more to implement it. It is like the project management side of that]	Phrases, sentences and words which do not refer to practical involvement in the work place.
11.2 Technical problem solving activities	Phrases, sentences and words which refer to problem solving of technical issues in the work place.  <b>Examples of participant's responses: (2, 4)</b> <i>'[Ek hou van] die uitsorteer of oplos ...ook [I like the sorting out or find the solution ... as well],', 'Special skills and talents: 'Problem solving ...dis partykeer vir my moeilik om nie te luister as iemand anders [tegniese]goed vra nie', 'Ek dink die[my] "problem identification" is goed ...'</i> [...sometimes it is difficult not to listen if someone asks technical questions (to others in the same room )], [I my think problem identification is good ...]	Phrases, sentences and words which do not refer to solving technical issues in the work place.
<b>Theme 12: Life script</b> Data which refers to his life plan which the participant wants to satisfy.		
<b>Subthemes</b>	<b>Inclusion criteria</b>	<b>Exclusion criteria</b>
12.1 Personal development	Phrases, sentences and words used by the participant which refer to opportunities and interest to develop himself.  <b>Examples of participant's responses: (1,2, 3)</b> <i>'Ek wil myself ... tot die beste "equip" vir dit wat ek ... gaan doen', 'Ek het 'n lekker mentor gekry ...', '... in die persoonlike ontwikkelingsprogram wat ek ... gedoen het', 'Ek het my eerste "design" projek gekry, so dit gaan goed', 'Ek wil kyk as ek hoonours doen of ek nie die jaar daarna my meesters kan doen ...', '...my lynbestuurder het ... gesê dat as ek verder wil "swot" kan ons kyk of ek dit nie deur die maatskappy kan doen nie', '99% of the time you will always be wrong but 100% of the time you will learn something new'</i> [I want to equip myself to the best that I can], [I was assigned a great mentor ...], [...in the personal development programme that I did], [I received my first design project, so it goes well], [I want to see if I can do my honour degree and straight after that my masters'], [My line manager said that the company would consider to pay my studies if I want to study further]	Phrases, sentences and words used by the participant which do not refer to opportunities and interest to develop himself.
12.2 Help others to grow	Phrases, sentences and words which refer to helping others in his working environment to grow and develop.  <b>Examples of participant's responses: (5)</b> <i>[Om seker te maak] dat hulle in 'n omgewing is waar hulle kan groei', '... dit maklik maak vir ander mense om ook te groei in daardie omgewing'</i> [To make sure that they will be in an environment where they can grow], [...I want to enable others to also grow in that environment]	Phrases, sentences and words which do not refer to helping others in his working environment to grow and develop.

<b>Theme 13: Self advice</b>		
Personal recommendations which guides the participant.		
<b>Subthemes</b>	<b>Inclusion criteria</b>	<b>Exclusion criteria</b>
13.1 Concerning people, work, life	Phrases, sentences and words which refer to gathered wisdom and advice from the participant to himself regarding people, work and life in general.	Phrases, sentences and words which do not refer to gathered wisdom and advice from the participant to himself regarding people, work and life in general.
	<b>Examples of participant's responses: (4, 5)</b> <i>'Laat altyd 'n lekker smaak in iemand anders se mond'</i> [Always leave a good taste in the mouths of others if you leave them] <i>'Doen jou bes!'</i> [Do your best!] 'Everything too dumb to be spoken should be sung'	

ANNEXURE D: Career genogram

Career Genogram: George



**ANNEXURE E: Overview of categories, themes and sub-themes in the data sources**

Sessions				1	2	3	3	4	5	5	6	6	7	8
Categories	Themes	Sub-subthemes	Sub-subthemes	Intro interview	Collage	SDS	Genogram	MBTI	CIP	Life chapters	EQ-i	CAAS	ERT	CCI
Differential facets	Abilities	Chemical engineer		X	Xx				X					
Differential facets	Abilities	Leader	Leadership positions	X	X	X			X					
Differential facets	Abilities	People skills	People pleaser Successful with technicians, network of contacts, humanistic	Xxxx	X	X		X	Xx x		X			X
Differential facets	Abilities	Problem solver			Xx	Xx		X	Xx		X			Xx
Differential facets	Abilities	Swimming champion		X	X				X					
Differential facets	Family background	First generation graduate					X		X					
Differential facets	Family background	Only child		X			X							
Differential facets	Family background	Strong identification with mother												
Differential facets	Family background	Supportive parents		X	X		X							

Sessions				1	2	3	3	4	5	5	6	6	7	8
Categories	Themes	Sub-subthemes	Sub-subthemes	Intro interview	Collage	SDS	Genogram	MBTI	CIP	Life chapters	EQ-i	CAAS	ERT	CCI
Differential facets	Interests	Business, entrepreneurial		X	X	X	X	X	X					
Differential facets	Interests	Cooking		X	X		X		X					
Differential facets	Interests	Outdoors, adventure sports, photography, travel in Africa	Adventurous		Xxx x	X		X	X					
Differential facets	Interests	Engineering, Natural sciences				X			X					
Differential facets	Interests	Executive management				X			X					X
Differential facets	Personal traits	Achiever	Sports, employee	Xx	X	X			X	X				Xxx
Differential facets	Personal traits	Achiever	It is important to win, results orientated	X		Xx x			X		X		X	
Differential facets	Personal traits	Emotional dependency	Self-destructive	X					Xx x		X			X
Differential facets	Personal traits	Emotional dependency	Needs affirmation/approval						X		X		Xx	

Sessions				1	2	3	3	4	5	5	6	6	7	8
Categories	Themes	Sub-subthemes	Sub-subthemes	Intro interview	Collage	SDS	Genogram	MBTI	CIP	Life chapters	EQ-i	CAAS	ERT	CCI
Differential facets	Personal traits	Extravert	Needs loyalty from friends, extensive network	X				Xx					X	
Differential facets	Personal traits	Hospitability			Xx		X		X					
Differential facets	Personal traits	Impatient	Doesn't like to struggle						X					
Differential facets	Personal traits	Not rigid/flexible	Easy going, can adapt to social situations, fun to be with	XX		X		Xx	Xx		X			
Differential facets	Personal traits	Resilient	Academic studies				X		X					
Differential facets	Personal traits	Social	Hospitable, fun loving		X	X	X	X	Xx x		X			
Differential facets	Values	Ethical & Spiritual principles		X	X				Xx x	X				X
Differential facets	Values	Values achievements		X					X					
Differential facets	Values	Values achievements	Success										X	
Differential facets	Values	Values money		X					X					

Sessions				1	2	3	3	4	5	5	6	6	7	8
Categories	Themes	Sub-subthemes	Sub-subthemes	Intro interview	Collage	SDS	Genogram	MBTI	CIP	Life chapters	EQ-i	CAAS	ERT	CCI
Differential facets	Values	Values relationships		X		X			X					
Differential facets	Values	Ethical principles	Wants to do what it right	X										
Developmental facets	Adaptive accomplishment	Career path	Concern	Xx	X						X	X		
Developmental facets	Adaptive accomplishment	Fitting in	New town, first year university, work division	Xxx	X				X				X	
Developmental facets	Adaptive accomplishment	Further Studies	What, when	X								X		X
Developmental facets	Adaptive accomplishment	Relationships	Work stress impacts relationships with girlfriend	Xx	X				X					X
Developmental facets	Adaptive accomplishment	Relationships	Away from friends	X										
Developmental facets	Adaptive accomplishment	Relationships	Work hard at relationships with fellow workers	X					X		X			
Developmental facets	Adaptive accomplishment	Work content	Not stimulating enough: not appropriate division	X					X			X		

Sessions				1	2	3	3	4	5	5	6	6	7	8
Categories	Themes	Sub-subthemes	Sub-subthemes	Intro interview	Collage	SDS	Genogram	MBTI	CIP	Life chapters	EQ-i	CAAS	ERT	CCI
Developmental facets	Adaptive accomplishment	Work content	Routine work is boring, doesn't like office, admin jobs, overwhelmed by detail	X				X	Xx x			X		
Developmental facets	Adaptive accomplishment	Work content	Hands-on, active, physically involved			X		Xx	X	X		X	X	X
Developmental facets	Adaptive accomplishment	Work role	Concern	X	Xx				X		X	X		
Developmental facets	Adaptive accomplishment	Work role	Project management											
Developmental facets	Challenges	Academic work	Doubt if degree is sufficient, doubt study choice, struggled at university	Xx					X	X		X		X
Developmental facets	Challenges	Lack of Confidence	People with more experience	X								X	X	
Developmental facets	Challenges	Lack of Confidence	Humiliation: not good enough, have to prove myself										X	
Developmental facets	Challenges	Emotional control	Difficult to express emotion			X			X	X			X	X



Sessions				1	2	3	3	4	5	5	6	6	7	8
Categories	Themes	Sub-subthemes	Sub-subthemes	Intro interview	Collage	SDS	Genogram	MBTI	CIP	Life chapters	EQ-i	CAAS	ERT	CCI
Developmental facets	Coping Mechanisms	Career counselling	Career counsellor	X					X		X			
Developmental facets	Coping Mechanisms	Listening to music							X					X
Developmental facets	Coping Mechanisms	Learn by doing	Practical	X	X	X		X						
Developmental facets	Coping mechanisms	Counselling	Life-coach	X					Xx		X		X	
Dynamic facets	Aspirations	Financial freedom		Xx			X							X
Dynamic facets	Aspirations	Inspirational leader	Wants to lead well	Xx		X			X					X
Dynamic facets	Aspirations	Inspirational leader	Wants to leave a legacy	Xx					X	X				X
Dynamic facets	Aspirations	Inspirational leader	Interested in corporate and management structure as possible job in future	X					X					
Dynamic facets	Aspirations	Want to be technically strong/specialist to distinguish self		X		X			Xx x		X			Xxx

Sessions				1	2	3	3	4	5	5	6	6	7	8
Categories	Themes	Sub-subthemes	Sub-subthemes	Intro interview	Collage	SDS	Genogram	MBTI	CIP	Life chapters	EQ-i	CAAS	ERT	CCI
Dynamic facets	Pre-occupations	Disappointment of others							X				X	X
Dynamic facets	Pre-occupations	Failure, Fall	Academically	X					Xx x				Xx x	Xx
Dynamic facets	Pre-occupations	Success							Xx	X			X	
Dynamic facets	Work setting	Hands-on, technical problem solving		X		X		X	Xx					X
Dynamic facets	Script	Personal development, help others to grow		X		X		X	Xx					X
Dynamic facets	Self-advice	People, work, life		X					Xx					X
Number of responses				54	25	22	9	15	66	7	11	8	16	27

**ANNEXURE F: Ethical clearance certificate**



**UNIVERSITEIT VAN PRETORIA**  
**UNIVERSITY OF PRETORIA**  
**YUNIBESITHI YA PRETORIA**  
Faculty of Education

RESEARCH ETHICS COMMITTEE

**CLEARANCE CERTIFICATE**

**CLEARANCE NUMBER :**

EP 13/04/03

**DEGREE AND PROJECT**

MEd

Using a narrative approach to develop the sense of a young engineer

**INVESTIGATOR(S)**

Erna Gerrits

**DEPARTMENT**

Educational psychology

**DATE CONSIDERED**

20 November 2013

**DECISION OF THE COMMITTEE**

APPROVED


Please note:

*For Masters applications, ethical clearance is valid for 2 years*

*For PhD applications, ethical clearance is valid for 3 years.*

**CHAIRPERSON OF ETHICS  
COMMITTEE**

Prof Liesel Ebersöhn



DATE

20 November 2013

CC

Jeannie Beukes  
Liesel Ebersöhn  
Prof Kobus Maree

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

1. 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.