AN EVALUATION OF A POSSIBLE INCREASE IN SELF-KNOWLEDGE THROUGH A CAREER COUNSELLING INTERVENTION FOR GRADE 11 LEARNERS IN PREVIOUSLY DISADVANTAGED SCHOOLS

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Thesis presented in fulfilment of the requirements for the degree of M.Comm. (Psych) Industrial Psychology at the University of Stellenbosch

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ABSTRACT

Organisations are largely dependent on their workforce in order to be successful and competitive. In order to do accomplish this goal, employees need to be motivated and feel satisfaction in their jobs. Employees who are unhappy in their work will be unproductive and eventually become a cost to their employers. Employees who have made the wrong career choice are more likely to be unhappy in the workplace and it is therefore very important to make the correct career choice from the beginning.

In South Africa, the choice of a career usually occurs when one is still in Grade 11 or Grade 12. Unfortunately, career counselling is expensive and many learners' parents do not have the financial capacity to afford career counselling, resulting in their children making a career choice based on the available information that they are able to access. These sources of information often are incorrect or incomplete, leading to a wrong career choice. At this stage, an adequate level of self-knowledge in order to make an informed career choice is not always present, either.

Self-knowledge, consisting of personality, aptitude and interests, is an important construct necessary for making an informed career choice. The aim of this research study was to develop a group-based, low cost career counselling intervention for Grade 11 learners in schools where the learners would not otherwise be able to access career counselling, with the intention of increasing their self-knowledge. Three subtests of the Differential Aptitude Test, the 16 Personality Factor Questionnaire and the Meyers Interest Questionnaire were utilised in the intervention and self-knowledge was measured using a self-developed questionnaire based on the Career Development Questionnaire.

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The statistical results indicated that this intervention was successful in increasing self-knowledge, but it was also seen that the intervention led to an increase in career maturity. This group-based, relatively low-cost career-counselling intervention can therefore be offered to schools whose learners are not able to afford individual career counselling as it will assist learners, through increasing their self-knowledge and level of career maturity, in making a more informed career choice.

¹ Statistical results indicated that a second factor, namely "career maturity", had also been measured through the questionnaire and had been positively influenced by the intervention.

OPSOMMING

Ondernemings is grootliks afhanklik van hul werknemers om suksesvol en kompeterend te wees. Vir ondernemings om hierdie doelwit te bereik, is dit belangrik dat hul werknemers gemotiveerd en tevrede in hul posisies moet wees. Werknemers wat ongelukkig in hul werk is, sal onproduktief wees en sal uiteindelik 'n koste vir hul werkgewers word. Werknemers wat die verkeerde loopbaankeuse gemaak het, is meer geneig daartoe om ongelukkig in die werkplek te wees and daarom is dit baie belangrik om die regte loopbaankeuse van die begin af te maak.

In Suid-Afrika is dit gewoonlik nodig om 'n loopbaankeuse in Graad 11 of Graad 12 te maak. Loopbaanvoorligting is ongelukkig duur en baie leerders se ouers het nie die finansiële vermoë om loopbaanvoorligting vir hul kinders te bekostig nie. Dit lei daartoe dat hierdie leerders loopbaankeuses maak op grond van die inligting wat tot hulle beskikking is. Hierdie inligtingsbronne is in baie gevalle onvolledig of verkeerd, wat tot 'n verkeerde keuse kan lei. Die voldoende vlak van selfkennis wat nodig is om 'n ingeligte beroepskeuse te maak,is nie altyd op hierdie ouderdom teenwoording nie

Selfkennis, wat uit persoonlikheid, aanleg en belangstellings saamgestel is, is 'n belangrike konstruk wat nodig is om 'n ingeligte beroepskeuse te maak. Die doel van hierdie navorsingstudie was om 'n groepsgebaseerde, lae-koste loopbaanvoorligtingintervensie vir Graad 11-leerders te ontwikkel, met die doel om hul selfkennis te verhoog. Hierdie intervensie is gemik op skole waar leerders dit nie andersins sou kon bekostig om loopbaanvoorligting te bekom nie. Drie subtoetse van die Differensiële Aanlegtoets, die 16 Persoonlikheidsfaktor Vraelys, sowel as

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Meyer se Belangstellingsvraelys is in die intervensie gebruik. Selfkennis word gemeet deur die gebruik van 'n self-ontwikkelde vraelys wat op die Loopbaanontwikkelingsvraelys gebaseer is.

Die statistiese resultate het aangedui dat die intervensie suksesvol vir die verhoging van selfkennis aangewend kon word, maar daar is ook gevind dat die intervensie tot 'n verhoging in loopbaanvolwassenheid gelei het.² Hierdie groepsgebaseerde, loopbaanvoorligtingsintervensie kan daarom met redelik lae koste aan skole gebied word waar leerders nie loopbaanvoorligting kan bekostig nie, aangesien dit die leerders sal help om vanweë die verhoging van hul selfkennis en vlak van loopbaanvolwassenheid 'n beter ingeligte beroepskeuse te maak.

² Statistiese resultate het aangedui dat 'n tweede faktor, naamklik "loopbaanvolwassenheid" ook deur die vraelys gemeet is en dat die intervensie 'n positiewe invloed daarop gehad het.

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DEDICATION

I would like to dedicate this dissertation to my parents, Jean and Engela. I would not have been able to come this far without their continued support. For that I am forever grateful.

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INTRODUCTION AND RESEARCH OBJECTIVES

1.1 Introduction

The introductory section presents the research objectives as well as the argument regarding why the research objective is seen as relevant and important to the discipline and practice of Human Resource Management, specifically to Industrial Psychology in South Africa.

Macro-environmental factors have an inevitable effect on organisations and their success. It is therefore important for organisations to be aware of these factors so as to manage the effects thereof (Buchanan & Gibb, 1998). These factors form part of the external business environment and can be classified as all the physical and social factors that need to be included in organisational decision making (Peng & Nunes, 2007). The macro-environmental factors include political, economic, social, technological, environmental and legal factors (Peng & Nunes). All of these need to be taken into account by organisations; however, for the purposes of this study, the economic factors comprise the focus area.

The economic environment at large has to be looked at and understood in order to understand the effect that it might have on the South African economic environment. According to the South Africa Economy Profile 2013 (2013), South Africa is seen as a middle-income, developing market with a vast supply of natural resources. The country has well-developed legal, energy, financial, transport and communications sectors and modern infrastructures in the major urban centres. South Africa further has a stock exchange that is recognised as the 18th largest in the world. When evaluating the relative economic growth (or decline) over the last decade or so, growth occurred in the period from 2004 to 2007 due to the macro-economic stability of the world and the boom of global commodities. However, the growth began to slow during the middle of 2007 due to the electricity crisis experienced by the country due to Eskom. A further factor that influenced growth was the global financial crisis that impacted commodity prices and demand. Subsequently, the GDP fell to almost 2% in 2009, but has since recovered somewhat during 2010-2012. Unemployment remains one of the biggest problems, with nearly one-quarter of the workforce being

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unemployed. Outdated infrastructure, as experienced by Eskom, still constrains further growth. The effects of Apartheid are still visible in the economic field as can be seen in the levels of poverty, the lack of economic empowerment among disadvantaged groups and a shortage of public transportation (South Africa Economy Profile, 2013). South Africa is following an economic policy focused on controlling inflation, but significant shortfalls in the country's budget limit the government's ability to deal with all the economic problems.

The question might now arise as to what the relevance of the aforementioned might be for organisations in South Africa? In partial answer to the question, the fact remains that approximately 50% of South Africa's population was still living below the poverty line in 2010 and the country still had an estimated unemployment percentage of 24.4% in 2012. According to Stats Online (2013), 623 000 South Africans were unemployed in April-June 2013 and the estimated unemployment rate for July-September 2013 was 24, 7% (Quarterly Labour Force Survey, 2013). However, according to the Quarterly Labour Force Survey of Quarter 3, 2013, that was not the case. Instead, the unemployment rate decreased with 0.9 of a percentage point from April-June 2013 to July-September 2013. Furthermore, compared to the same period in 2012, the unemployment rate for July-September 2013 was 1.2% lower than it had been in 2012. These statistics indicate that unemployment remains a very serious concern in South Africa, despite the slight decrease. Employers, as well as future employees, need to be aware of this fact, as this results in greater competition when it comes to job applications and employing the best candidate with the best profile.

The net result is that individuals have to compete with a large number of other individuals to gain employment. It is understandable that organisations will appoint the candidate who best fits the job requirements, since an individual who does not fit the job profile will most probably be less productive, thereby affecting the production of the organisation and also keeping a more competent person out of employment. A further implication of job scarcity is that individuals who are unhappy in their jobs due to poor person-job fit, might be afraid and reluctant to try something else, since the danger of losing work security is just too big. From the perspective of the economy, it is thus important for organisations to select the right candidates for the

limited number of jobs available out of a vast pool of applicants (Grobler & Warnich, 2006).

A core definition that is applicable to almost all organisations is that they are manmade marvels with the sole purpose of serving and satisfying the needs and wants of consumers while making a profit (Theron, 2012). The King reports add another dimension when pointing out that there are more stakeholders than shareholders only, including, for instance, "employees" as other important stakeholders, thus emphasising the value of human capital (King Committee on Corporate Governance, 2002). What this implies is that employees should have an interest in or concern with the organisation they work for as the success of the organisation ultimately will affect them. Appointing employees with this mind set will therefor lead to an increase in the value of the organisation's human capital. Adding perceived value entails transforming scarce resources into outputs that consumers find valuable, and for this the appropriate human capital is required. The science of selecting the right person for the job therefore remains as important as ever, if not more so, given the increasing competitiveness between organisations.

Human beings are complex and their needs and wants change regularly, therefore it is not always easy to identify the needs and wants of consumers. When organisations decide on a need or want to satisfy, it is important to identify the different options available and focus on a need or want that is enduring, profitable and realistic.

After a decision has been made regarding what the organisation will produce or serve, the process of development must be planned and the necessary raw materials must be gathered. Finding and appointing the appropriate human capital for an organisation forms part of the input phase when transforming raw materials into outputs. Without the input of human beings, organisations cannot exist. The interflow of ideas and management is necessary for an organisation to function and although constructive differences should be tolerated and indeed encouraged, it is important that every employee work towards the ultimate goal to add value to the clients of the organisation (Ulrich, 1996).

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Managing the workforce of an organisation is not always an easy task and directing them in the same direction is even harder. It is therefore advisable for managers to work with the assistance of the human resource department or with a human resource consultant, further on referred to as a human resource (HR) professional, which also may include industrial psychologists (Friedman, 2009). The human resource department is responsible for setting various systems in place to keep the workforce competent and motivated (Theron, 2012). Employees who add value to the organisation are seen as assets because they almost automatically follow the intended direction of the organisation. Organisations cannot afford to work with people who do not contribute to the organisation due to the economic pressure to perform and grow. According to Yager (2011), the average cost of replacing a new employee is about one-third of the employee's salary. It is therefore of great importance for organisations to employ the right candidate from the start. Competition between organisations and the dynamic surroundings within which organisations function also emphasise the need for a competent workforce (McCombs, 2010). This refers back to the macro-environmental factors discussed earlier.

The success of an employee or employer depends on many factors, but one of the most prominent factors is the person-job and person-environment fit (Boon, Den Hartog, Boselie & Paauwe, 2011). Lack of fit between a job and an individual's personality, for example, can lead to immense stress and unhappiness and will eventually lead to decreased job performance. There are various definitions for "job fit", but a good fit in general implies that a person's cognitive abilities, interests and personality dynamics fit those required by the job. In layman's terms it means that the person is doing what he/she does best, working with people that share his/her core values. According to Vogel and Feldman (2009), person-environment fit is the congruence of an individual with his/her work environment. From the perspective of the employer, a good fit is important as it will have bottom-line impact as employees will tend to be more productive. Holland (1959) stated that a good personenvironment fit will have an impact on employees' reinforcement and satisfaction levels as well as their intention to leave the organisation. Kristof (1996) and Tinsley (2000) found that person-environment fit will lead to job satisfaction, personal career success and primary task performance. The alternative will probably imply less job

satisfaction, lower productivity, low self-esteem and higher personnel turnover with a resultant negative impact on the bottom line.

Sinha (2011) is of the opinion that an individual who made the wrong career choice may not be able to perform according to the expected performance standards of the organisation, influencing his/her value to the organisation in terms of productivity. Given the effects of a misfit, choosing a career is a very important decision and great attention must be given to the process. The role of the HR professional is critical in helping individuals with this process. The responsibility of matching the right person to a job lies not with the employee and the decision to choose the right position only. The HR professional also has a responsibility to select the right candidate for a job. Selecting the right candidate is not an easy task. It includes being able to identify a person with the right skills to fit the job out of a pool of applicants. A critical aspect in this process is to have a good job description and job specification. When this is available, it is much easier to know what type of person to appoint and mistakes will be reduced. A good job description should inform a prospective applicant what job functions he or she will be expected to perform. The applicant can then determine whether or not he/she will be able to carry out the job functions and on that basis decide whether to apply for the position (Karon, 1995). The fit between the job and the employee will then be better as the requirements of the job will be met by the employee.

For most people, choosing a career is not an easy decision; the process is complex and requires some introspection in order to understand oneself better. To illustrate this, research, for example by Greenhaus, Hawkins and Brenner (1983) and Noe and Steffy (1987), has shown that students who reported extensive awareness of their values and their chosen field, tend to establish more satisfying occupational goals when compared to those who were relatively unaware of self and the career field. Human resource managers and HR professionals could and should therefore actively assist individuals with their career choices

Individuals who are unhappy in their jobs rarely do well and consequently lose pay or support or even both (Dueesa, 2003). The problems associated with a person who is unhappy in the workplace or is in the wrong career, is enough motivation for

industrial psychologists to help people to make the right choices early enough, although, in a broader context, the benefits to the economy at large are substantial. An example of this is from a study that found that the efforts of unhappy workers results in lower productivity which costs the US economy more than \$300 billion annually (Amabile & Kramer, 2012).

The benefit of an employee who is happy in his/her job is strongly correlated with greater performance and productivity (Moulesong, 2010). An employee who has made the right career choice and is satisfied with his/her job, is more likely to display organisational commitment than an employee who is not satisfied in his/her job. Since the latter are unsatisfied and not really committed to the organisation, their intention to quit will consequently be higher (Barak, Nissly, & Levin, 2001). Turnover affects organisations in the sense that it leads to direct as well as indirect costs. According to Barak, Nissly and Levin, the direct costs of employee turnover can be categorised in three categories, namely: separation costs (referring for example to exit interviews, administration and separation pay); replacement (advertisement of vacancies, pre-employment administration, interviews and psychometric testing); and training costs (formal training and on-the-job training). Indirect costs refer to the loss of productivity/efficiency in the time before the employee leaves; the possible decline of productivity of co-workers; and the initial low productivity when the new employee is still learning how to do the job.

A career counselling intervention is a valuable process for helping with choosing a career. According to McMahon, Patton and Watson (2005), career choice is a lifelong process that needs to be continually reflected upon in order to assist individuals to review their priorities or any influences that may have changed. In order to make a career choice, three dimensions are necessary, namely: self-knowledge; level of acquaintance regarding different occupations; and the fit between self-knowledge and the world of work (Foxcroft & Roodt, 2005). Career counselling is a process which enables individuals to recognise and develop their resources in order to make career-related decisions and to manage problems that are career related (Nathan & Hill, 2006).

When careers are discussed, certain closely related terms are used to refer to different aspects in this field. It is important to be aware that these terms are used interchangeably at times. One underlying, similar thread is that all of these concepts play a very important role in the choice of a suitable career and gaining better self-knowledge. Career counselling is defined by Herr and Cramer (1979, p. 274) as a

...largely verbal process in which a counsellor and counselee(s) are in a dynamic interaction and in which the counsellor employs a repertoire of diverse behaviours to bring about self-understanding and action in the form of good decision-making in the counselee, who has responsibility for his or her own actions.

The role of the counsellor is to help the individual identify occupations that are in alignment with his/her characteristics (Dawis & Lofquist, 1984; Holland, 1997). In essence, career counselling is important since an individual who is in an occupation that fits his/her interests, values, abilities and personality, is more likely to experience success and satisfaction than someone who is in the wrong occupation (Williamson, 1972). Career counselling or guidance can take different forms in an organisation, depending on what the need in the organisation is. Career development discussions, with regard to career succession planning; career support for specific groups, such as for disabled individuals; career development for talent pools; and career counselling in times of restructuring, are just a few examples (Nathan & Hill, 2006).

One of the factors that currently play a role in organisations is the ability to manage change. Organisations are constantly restructuring in order to remain current and competitive, which ultimately have an impact on employers' and employees' work security. Employers and employees have to remain updated regarding their skills and also have to be able to adapt to new situations that demand different knowledge and skills to those that they are used to. Due to restructuring and downsizing in organisations, employees have begun to follow careers over multiple firms and boundaries in order to maintain formal employment (Arthur & Rousseau, 1996). The term "boundaryless careers" is becoming the norm instead of the exception (Arthur & Rousseau; Miles & Snow, 1996). In order to follow a boundaryless career, individuals need portable skills, knowledge and abilities that can be applied across multiple firms. Personal identification with meaningful work also forms an important

component, as does on-the-job action learning. Individual responsibility has to be taken for this, but some individuals might lack the knowledge and skills to do this on their own (Brousseau, Driver, Eneroth & Larsson, 1996; Raider & Burt, 1996). This is where the help of the career counsellor (HR professional) comes in. According to Savickas (2012), greater effort, a deeper level of self-knowledge and more confidence than ever before is necessary in order to enter today's world of work. The counsellor can guide the individual in doing self-exploration in order to determine what other possible careers can be followed. Career counselling or guidance can play a role in helping these individuals to deal and manage this change.

Career counselling or guidance in organisations can further become a need resulting from the consequences of adult development. Theories of adult development have been proposed by Super and Levinson, that of Super being is the most familiar (Borgen, 1991; Newton, 1994). Super's theory follows a life-span approach; he has identified career stages to describe how individuals implement their self-concept through the vocational choices that they make. The original theory suggests that choosing an occupation can be summarised over four career stages, namely: exploration, establishment, maintenance and disengagement, which eventually phases into retirement (Super, 1984). However, times have changed and Hall and Mirvis (1996), have stated that instead of only one set of career stages, multiple, shorter stages now exist over an individual's life span. Instead of following the normal career stage as proposed by Super, an individual today follows a series of mini stages of exploration-trial-mastery-exit across different functions, organisations and even other work boundaries. Super's original theory was based on chronological age and the revised version is based on constant learning and mastery. The new approach integrates Super's developmental career stage model as well as the concept of a boundaryless career (Arthur & Rousseau, 1996; Hall & Mirvis). Individuals can also experience a mid-career crisis which occurs when an individual becomes restless or discontent with a current career (Mid-Life Career Crisis Overview, 2008). This again creates the need for a career counselling intervention to help individuals to successfully adapt to the different stages/careers.

"Talent pools" in organisations require the use of career counselling or development. Management identifies employees in their organisation that they perceive to be talented and whom they do not want to lose to their competitors. These employees are then given the opportunity to be developed further and are given career development assistance in order to enhance their knowledge and skills (Nathan & Hill, 2006). From the point of the organisation, the cost-benefit is high to invest in talented employees who display the potential to become future leaders or become technical experts. However, there seems to be problems in this regard. Firstly, employees who do not form part of the "talent pool" might feel left out and might become hostile towards those who do form part of the pool. Secondly, career counselling should not be exclusively kept for the "talent pool". Other employees might struggle with career related problems, and if not adequately addressed, might lead to loss of production or even the loss of that employee (Nathan & Hill). According to them, the solution is to provide career counselling to all employees and to inform them as to how they can get access to it. Further career counselling can still be provided to "talent pools", but not at the cost of employees who do not fall in this group.

Employment Equity legislation and Broad Based Black Economic Empowerment are further aspects that organisations have to take into consideration when they employ new employees as it requires of organisations to employ a certain percentage of previously disadvantaged individuals. The problem however is that very often there is not a very strong pool of previously disadvantaged applicants to recruit from. There are different reasons for this, but one of the reasons might be due to a lack of career counselling.

Career counselling at organisational level is of great value, but it is even more important to conduct career counselling at a younger age. If individuals can be helped at a younger age to choose the right career, they would be less likely to change careers at a later stage due to the wrong choice (Alika, 2012). Based on this argument, a career counselling intervention was developed for Grade 11 learners. Career counselling at school can act as the foundation phase when it comes to career development discussions in the working environment.

If learners, especially previously disadvantaged learners at school, can be assisted in making a more informed career choice through the gaining of self-knowledge, a better flow or pool of previously disadvantaged employees will be available to choose from. Employees who were guided in terms of their career choice, would have made a more informed career choice than those who did not have the opportunity of career counselling.

Self-knowledge, comprising personality, aptitude and interests, play a critical role in making the correct career choice. It is argued that an increase in self-knowledge will lead to a more informed career choice. The career counselling intervention therefor had the aim of increasing the learners' level of self-knowledge through focusing on personality, aptitude and interests. Since career counselling cannot be afforded by the average South African citizen, it was decided to investigate a group-based intervention with the aim of determining whether such an intervention may eventually have a positive impact on the learners' level of self-knowledge. The idea was to provide group-based career counselling for schools with learners who otherwise would not be able to afford individual career counselling.

Career counselling assists with the career choice process. The career choice process is not necessarily focused on the career choice that is made, but is rather focused on how decisions are made. A certain level of career maturity is necessary in order to follow the right processes in making an informed career choice (Salkind, 2007). Self-knowledge, together with adequate exploration, occupational knowledge and decision-making knowledge can contribute to higher levels of career maturity (Callanan & Greenhaus, 2006).

As a further consideration, a focus was also placed on increasing the learners' agency or willpower to act on their newly acquired self-knowledge even though this was not explicitly tested.

1.2 Rationale and objectives of this research

The rationale of this research study was to assist learners in previously disadvantaged schools in gaining self-knowledge in order to make a more informed career choice. Individual career counselling is not affordable by all, resulting in many

learners making an ill-judgement when it comes to a career choice. A group-based intervention was developed in order to specifically address this need.

The research objectives of this study were as follows:

- Develop and design a group-based career counselling intervention for Grade 11 learners.
- Empirically evaluate the impact of the intervention on self-knowledge (regarding personality, interests and aptitude) of Grade 11 learners at two Western Cape high schools.
- Develop a sense of willpower/agency to act on the newly acquired self-knowledge, but not explicitly test whether or not this has been achieved.³
- Add to the literature on career counselling interventions in South Africa due to the fact that not much research has previously been conducted with regards to this specific topic.

1.3 Overview of the study

This research report has the following structure: Chapter 1 presents the introduction as well as a discussion of the research objectives. Chapter 2 entails a review of literature regarding the importance of, and the research findings on, career counselling, and more specifically career counselling for school children. Chapter 3 describes the research methodology that was used for the study and Chapter 4 presents the results of the study. In Chapter 5 the conclusions and recommendations of the study are discussed.

³ The statistical results indicated that a second factor, namely career maturity had been measured by the questionnaire. Career maturity was most probably influenced by this objective.

CHAPTER 2

LITERATURE STUDY

2.1 Introduction

In this chapter the concept of a career counselling intervention is described through exploring associated concepts, not only locally, but also globally. The literature overview attempts to provide a contextual framework for this purpose by looking at aspects such as the historical perspective of providing career guidance at South African schools and the development of the self-concept through such interventions, as well as reviewing other school career interventions. It was important to develop a body of knowledge by having a look at existing research and literature on the subject (Kumar & Phrommathed, 2005).

The importance of career counselling in organisations was explained in Chapter 1, the focus of Chapter 2 therefore is more on the importance of career counselling for Grade 11 learners.

2.2 Career theories pertaining to childhood

Career theories provide us with a framework within which one can understand career choice and behaviour (Stead & Watson, 2006). Well-constructed career theories are clear about the terms, constructs and theoretical framework they describe. According to Brown (2002) a good theory must not only help us to understand what happens, but also how it happens.

According to Stead and Schulteiss (2003), many development theorists, such as Ginzberg, Gottfredson and Super have acknowledged the relevance of career development throughout the life span. Gottfredson (2002) traces career development through a process of eliminating unacceptable career alternatives (circumscription) and a process whereby alternatives are relinquished for ones perceived to be more accessible (compromise). According to Stead and Schultheiss, many established career theories view the foundational phase in childhood as an influential part in an individual's career development.

However, while many theorists have contributed to our understanding of childhood career development, Stead and Schultheiss (2003) state that Super probably provided the most comprehensive discussion on this topic with his Life-span theory as already mentioned briefly. Super referred to five stages of career development which are depicted in a Career Life Rainbow, Figure 2.1, comprising Growth (4 to 13 years), Exploration (14 to 24 years), Establishment (25 to 44 years), Maintenance (45 to 65 years) and Disengagement (65 years on). Accordingly, the age (14 to 24 years) of Grade 11 learners for whom the career counselling intervention in this study was developed corresponds to the low end of the Exploration phase suggested by Super. Different life roles are portrayed in the Life Career Rainbow; these roles, however, can be followed simultaneously throughout the developmental stages.

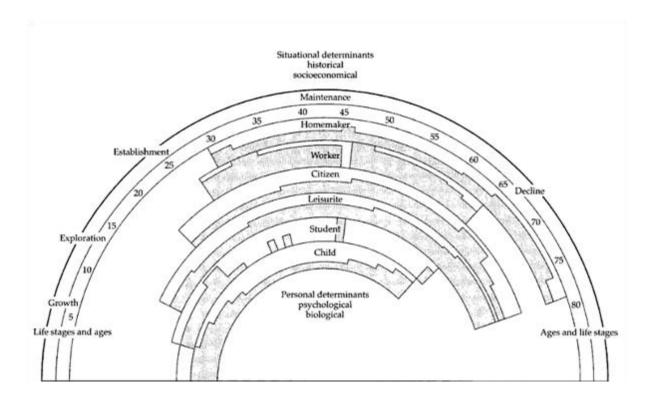


Figure 2.1 Career Life Rainbow

(Watson & Stead, 2006, p. 58)

The Exploration phase includes individuals between the ages of 14 and 25. These individuals make tentative career choices and are still exploring different careers

(Schreuder & Coetzee, 2011). Tentative choices are made in this phase and are then followed by further investigation in the chosen field. Although it is seen as positive that learners try to explore a possible field, it may also prevent them from looking further at other possible options. At such a young age, learners can easily stop exploring after finding something of interest. Another aspect that can arise during this phase is that learners may choose a career based on the expectations of their parents. Super (1984) states that career development can therefore be perceived as a development of the self-concept whereby individuals choose careers that will allow them to function in a role that is consistent with their self-concept.

In addition to Super's developmental stages, he also proposed vocational developmental tasks which should accompany the developmental stages (Miles, 2008). The vocational developmental tasks consist of crystallisation, specification, implementation, stabilisation and consolidation. The first developmental task, crystallisation, is handled between 14 and 18 years of age. During this period, an individual develops and plans a tentative vocational goal. The second task, specification, follows between 18 and 21 years and is about firming the individual's vocational goal. Implementation, the third task, occurring from 21 to 24 years of age is characterised by training for employment and obtaining a job. Stabilisation comes about between 24 and 35 years when an individual is working and confirming his/her career choice. Consolidation, the last developmental task takes place at 35 years and older and is about an individual's advancement in his/her career (Miles). Grade 11 learners fall in the period of the crystallisation task which is characterised by individuals planning and developing a tentative career. Career counselling at this age is therefore relevant for guiding these individuals towards the right careers in accordance with who they are.

In support of the decision to focus on Grade 11 learners, McDaniels and Hummel (1984) have stated that the early years of career development include three basic stages: (1) awareness, up to age 11, when children believe they can do anything they like and transform their desires into occupational preferences; (2) exploration, between ages 11 and 17, when tentative choices are made on the basis of interests, abilities and values; and (3) age 17 to young adulthood, when actual choices are made in the attempt to find a balance between personal capabilities and other appropriate influencing factors such as educational and employment opportunities.

McDaniels and Hummel's, as well as Super's comments with regard to the early years of career development, as mentioned, correspond to some degree with the implications of the prevailing educational system in South Africa that enforces certain subject choices at specific time intervals, which implicitly holds implications for the range of career decisions available to the learner at a later stage. In terms of this enforced timeline, the process of actively thinking about a possible career usually starts at the end of Grade 9 in high school when learners have to decide on subjects they want to take in grade 10. This forms the first phase in the timeline. At this point, many learners unfortunately do not have the self-knowledge or necessary information to make informed decisions and therefore it is possible to make mistakes in the choice of subjects in Grade 9. These mistakes could seriously hamper effective future career decisions. It is therefore implied that career guidance by qualified specialists will be needed even at this early stage to assist learners with gaining sufficient self-knowledge to decide on a possible career path in accordance with their interests, and talents.

In the absence of assistance from qualified specialists, learners might meet a wide range of different factors influencing their choices either directly or indirectly. These factors include the influence of teachers, family encouragement, the availability of money, location, desire to serve others, other interests, etc. (Sinha, 2011). The result of these influences may be positive or negative. If a wrong career choice is made for the wrong reasons, it would probably lead to low job satisfaction that, in turn, will lead to low life satisfaction. Perhaps the most important factor other than getting professional advice is to avoid influences that will affect career decisions negatively. In this instance, peer pressure and money are both potentially dangerous considerations. According to Alika (2012), peer group influence is more prominent and influential during adolescence than during any other time in life. Money, in turn, can affect career choice in two ways. A learner can either decide not to follow a specific career due to financial constraints, or a learner can choose a career which is certain to provide a high income rather than choosing a career out of interest.

Socio-economic factors are one of the aspects that can have a considerable direct or indirect effect on the career choices of learners. Stead (2004) noted that one's daily

activities are culturally embedded, which has been proved to affect an individual's career development. According to Watson, Foxcroft, Horn and Stead (1997), the career development of learners from previously disadvantaged communities faces more challenges due to a lack of exposure to career education programmes, unrealistic or inaccurate career aspirations, a lack of career role models and environmental and financial constraints and barriers. Gottfredson (1981) and Roe (1956) stated that one's socio-economic status influences one's career choice. Gottfredson further stated that learners from lower socio-economic circumstances have career aspirations for lower income occupations. This can be due to the fact that they possibly are more negative in terms of their opportunities (Harvey & Kerin, 2001).

After choosing their subjects in Grade 9, the next phase when learners should seek further career counselling in order to find clarity on a specific career path to follow occurs in Grade 11 or 12. Applications for tertiary institutions must be handed in early in the Grade 12 year. Final year marks for Grade 11 are required for applications. Hence, career decisions should have been finalised at this stage. If they start Grade 12 with the knowledge of what they want to study or do, there would be no need to make hasty decisions when they have to apply, which could easily lead to making the wrong choices. At this point it becomes even more important to invite collaborative efforts in career guidance by qualified specialists. According to Dupont and Gingas (1991), career counselling at this age is important since adolescents begin to engage in self-awareness and explore different career options. Without proper guidance, this might be guite a stressful time for them, therefore career counselling can assist these learners during the process. This will consequently reduce stress and enhance the quality of career decisions being made. Such assistance can help parents to influence their children's career development more effectively and also assist learners wisely by providing them with skills in understanding themselves better and also by understanding educational and occupational opportunities better (Herbert, 1986).

Career counselling at high school is therefore essential in ensuring proper career decision making. Learners are motivated to go for career counselling while still in

school in order to ease the process of eventually deciding on a career (Naicker, 1994).

As mentioned earlier, times have changed with regard to following a career. Instead of following one career for the rest of your life, individuals have tended to change careers and even change between different career fields in recent years. Savickas (2012) states that current career development theories need to be re-evaluated to remain relevant for the 21st century. Life-long learning needs to become the focus rather than fixed stages in a career path. However, there is still value in the current career theories which are used regularly.

2.2.1 Career counselling theories pertaining to career choices

Parsons (1909) developed a Trait-and-factor theory which states that an individual should have a clear knowledge and understanding of him/herself with regard to his/her aptitude, interests, abilities, skills, personality, etc. An understanding with regard to a possible career is also important if the right choice of an occupation that fits with an individual's personality, abilities and aptitude is to be made. In order to make the right choice, an individual must have understanding of the profile of a career and must then be able to identify whether he/she matches that profile (Schreuder & Coetzee, 2011). Learners in Grade 11 have to start thinking about making a career choice and therefor need to have self-knowledge. Better self-knowledge would help them to identify possible career choices that will accord with who they are.

The work adjustment theory of Dawis and Lofquist further adds to the knowledge about career choices. According to this theory there is a trade-off between the work environment and the individual in the sense that each requires from the other party to meet its needs (Stead & Watson, 1999). The person and the environment interact with one another in order to obtain the required reinforcement from each other. The employee works in order to meet the requirements of the work environment in exchange for reinforcement, which must satisfy the needs of the employee, such as his/her financial, psychological and social needs. A co-responsive relationship exists between the two (Dawis, 1996). Work adjustment *per se* can be defined as the time a person remains in a certain job environment. The theory states that work

adjustment can be predicted by looking at the abilities and values of an individual on the one hand, and the ability, requirements and reinforced patterns of the work environment on the other hand. This funnels down to person-job fit which leads to a stable work setting. Even though there are differences between the work adjustment theory and the trait-and-factor theory, one can see the work adjustment theory as the practical application of the trait-and-factor theory.

If an individual's traits and factors fit with the requirements of the job, the chances are better that his/her work adjustment will be better, depending, however, on whether the job meets all of the person's needs.

2.3 History of career counselling in secondary schools in South Africa

Looking at the history of career counselling in South Africa, one cannot shy away from the fact that Apartheid also had an impact on career counselling. It is no secret that previously disadvantaged people have received inadequate career counselling in the past and this consequently had an effect on the skewed distribution in South African career patterns today (Maree, 2009). Even today, career counselling is mostly only available to those who can afford it.

The discussion about the changing world of work also applies to the history of career counselling. HR professionals previously had to assist individuals in deciding on one career to follow for the rest of that person's life. Today, it is quite different. HR professionals have to keep abreast with all the changes and must help individuals to integrate their current career with new skills that are required (Maree, 2009). Historically, the results of psychometric tests were mainly used to make evaluations concerning the career an individual ought to follow. In recent years it has become clear that this has to change in South Africa. HR professionals have to use the results of psychometric tests and also take into account the social and historical background of an individual when they conduct career counselling (Maree). Another shift in focus is necessary. Previously, career counselling was conducted on an individual level, focusing on the individual's need and this is still the method most used due to its successful application results. According to Maree, however, it is important to keep in mind that South Africans come from different cultures and that group counselling, linking with the "ubuntu" concept, might be more relevant for

some groups as such groups value the importance of doing things in a group. This concept of community may be related to career maturity as well as life roles in the South African context (Stead & Watson, 1998). The question, however, concerns what the effectiveness of group-based career counselling is and what the sustainability thereof would be. Career counselling is expensive, as will be explained later, so will it be viable to propose group-based career counselling to schools as an alternative to individual career counselling and to consider whether the benefits will be the same.

Many parents take their children for professional career counselling where they then undergo psychometric evaluation and testing followed by individual feedback. A complete profile of the child which can guide the child in making the right career choice is then developed. Professional career counselling is of great value and assistance in helping learners to make an informed career choice. However, due to different socio-economic backgrounds and limited access to financial resources to pay for such counselling sessions, not all learners receive such an opportunity. According to Miles (2008), many South African learners in previously disadvantaged schools are still lacking the opportunity to receive any career counselling or guidance and it can subsequently lead to the child making the wrong choices or never reaching his/her full potential. It should be mentioned, however, that it is indeed possible for a learner to choose the right career without attending a career counselling session, but this is what generally happens. During childhood, children ought to have the opportunity to explore their likes and dislikes as well as their interests and aptitude. Gottfredson (2002) states that many children are not exposed to these types of activities and therefor never have the chance to stimulate their career development in terms of career interests. A career counselling intervention then becomes especially important for these children.

The cost of career counselling differs among providers, but the average cost can be anything from R1000 and upwards (Healthman Psychology Costing Guide 2013, 2013). There are providers of career counselling interventions who may ask less, but such counselling in general is still not affordable by all. Referring back to the level of poverty and unemployment in South Africa, one can understand that paying for career counselling is not always possible for parents in these circumstances. In

2009, career counselling in South Africa was still only accessible to those who could afford it. It is therefore of great importance to provide career counselling in previously disadvantaged schools that do not have the opportunity or facilities for career counselling (Maree, 2009).

The Department of Education has realised the importance of career counselling and guidance, as well as the fact that very few children have the privilege to go for formal career counselling. Consequently the subject Life Orientation was introduced in Curriculum in 2002 to form part of Outcomes Based Education (Kay, 2011). The subject has been implemented from Grade 1 to 12 and is compulsory for all learners. The purpose of this subject is to provide general and career guidance/education to children from a young age. The subject takes a holistic perspective on the development of children by focusing on social, emotional, physical, intellectual, psychological and spiritual development. The rationale behind the subject is that children, by the end of their school years, should be able to make an informed decision about a career as well as about a tertiary institution where they can pursue this career (Kay). Unfortunately, in reality, this is not really the case. Even though the subject has value and does contribute to children's knowledge about themselves, there are problems. One of the biggest problems with this subject is that many teachers are not qualified to teach the subject, especially in the more rural parts of the country. The effect is that the learners notice this and consequently regard the subject as less important.

The career education programmes that form part of the Life Orientation curriculum are not based on strong South African research, which leads to questioning the validity of these programmes in schools (Kay, 2011). According to Miles (2008) Life Orientation cannot be seen as a suitable replacement for career counselling due to the fact that learners do not view the subject as very important since it is not examinable. Based on these reasons, it is doubtful whether Life Orientation will provide sufficient knowledge to a learner for him/her to make an informed and right career choice. It is therefore strongly advised that career counselling is necessary in order to make a career choice. Unfortunately there is a lack of research with regard to the effectiveness of career counselling initiatives in South Africa (Miles).

Group-based career counselling provided as a community service to schools where learners would not otherwise be able to afford career counselling is a possible solution to this problem; however, as mentioned already, the viability and success thereof is unclear. It was with this in mind, that the group-based career counselling intervention of the current study was developed. It was argued that it was necessary to determine whether or not a group-based career counselling intervention will be effective in the place of individual career counselling where one-on-one feedback takes place. Instead of discussing individual profiles in detail, general feedback takes place while learners have their own profiles in front of them. A discussion of what different scores mean takes place and facilitators are available to assist learners should they have specific questions regarding their profiles. In order to determine this, it was decided that the goal would not be to provide specific career guidance to the learners. Since the group-based session that was followed would only provide limited individual feedback, it was decided to rather focus on self-knowledge and to measure whether or not the intervention would lead to a higher level of selfknowledge for each learner. The importance of self-knowledge in making a career choice is discussed throughout the study.

2.4 Evaluating the appropriateness of career counselling for Grade 11 learners

Career guidance plays an important role in helping an individual to make a career choice. Hossler, Braxton and Coopersmith (1989) identified career guidance at school, together with ability/achievement, academic results, education levels of parents and student aspirations, as factors that are important in college (i.e. tertiary education) entry. According to Carr (1985), the importance of career counselling at schools is not under any dispute, with many researchers praising the value thereof. These authors concluded that career counselling must indeed form part of the school curriculum. In addition, Yorke and Steward (1990) state that an informed student is better prepared to face and adapt to changes. Group-based career counselling is viewed as especially relevant in the South African context due to the changes in the educational guidelines which value group work in the school context. It provides the opportunity for learners to explore and formulate their career thinking and planning (Young et al., 2009). The group-based setting can add the further advantage of creating a place where mutual emotional support and feedback can be received,

experiences can be shared and new perspectives can be learned (Coman, Evans, & Burrows, 2002). The Further Education and Training curriculum has developed academic and vocational paths which are linked to industry. According to Stead and Watson (2006), many learners, however, do not possess the knowledge to understand the process and nature of work.

McCowan and McKenzie (1997) stated that career education/counselling is seen as an important component necessary in career development in Australia and this has been implemented in the Australian curriculum for all students from pre-school to school leavers. Research by McMahon, Gillies and Carrol (2000) found that learners who had been subjected to career education at school were able to make more links between their learning at school and certain occupations.

According to Ingels (1990), Nora and Cabrera (1993) and Mau (1995), Grade 9 has been identified as the critical age at which career counselling should be conducted. However, some disagreement remains; some arguing that structured earlier intervention would be beneficial. For instance, in Career Guidance - A Handbook for Policy Makers of the European Commission (2004), it is argued that for young people to make a smooth transition from primary school to the initial years of secondary school, counselling throughout this period (implying Grades 6 to 8 within the South African system), is a prerequisite. Going back even earlier, Gothard (1998), for example, found that even five months after a career counselling programme, Grade 4 learners remembered much of what they had heard in the programme they participated in, indicating the success of the programme. According to Nora and Cabrera, targeting interventions in the time span between Grade 7 and 10 is ideal to ensure the effectiveness of such career counselling initiatives.

However, opinions regarding the best timing for career counselling interventions will continue to differ. It could, however, be argued that there, in fact, is no reason to select only one ideal age, since career counselling at different ages, serves different purposes. For example, it could be argued that the main purpose of career counselling in Grade 9 could be to help learners select the right subjects going into Grade 10 – with future career decisions in mind. Hence the focus at this stage is placed on a possible career or career direction, but it is not necessarily the career that the learner will eventually follow. Career counselling in Grade 11 or 12, however,

serves the purpose of helping the learner in their decision making regarding a career choice in order to apply for the correct course at a tertiary institution. Referring back to Super's life career stages, learners in Grade 11 fall in the Exploration phase. It is therefore relevant to provide counselling to learners who are in the process of exploring career opportunities. According to Stead and Watson (2006), many school guidance teachers have also noted that learners only begin to show interest in career programmes and interventions from Grade 11 onwards and are not really interested in earlier grades. Providing career counselling at Grade 11 level is therefore appropriate, especially since it co-occurs with the time in which they have to start thinking about career choices.

2.5 Important constructs in career counselling

As mentioned earlier, the goal of career counselling is to help individuals gain better self-knowledge in order to make an informed career choice. According to Kidd (1984), self-concepts and concepts of occupational preferences are important in career development. Possessing self-knowledge is important since it is stated that a good occupational decision is made and person-job fit is obtained when an individual's needs, values, interests and capacities are matched to the demands and rewards of an occupation (Holland, 1959). Individuals will experience more satisfactory work outcomes if their interests match their vocations (Tranberg, Slane, & Ekeberg, 1993)

Self-knowledge is the single basic goal of a school career counselling intervention (Chuenyane, 1983). He mentioned that learners, through self-knowledge, can begin to know and utilise their values, interests, personality, aptitude and limitations. He further states that self-knowledge increases analytical and critical thinking as well as growth and development. Learners with sound self-knowledge will therefore make more realistic and rational career choices. Holland (1973) also states that self-knowledge is necessary in order to make a good career choice

Kay (2011) states that the development of a self-concept or self-knowledge is about gathering information about your values, interests and abilities. According to Borrow (1982), personality type also plays a role in the fit between a person and a job/environment and is also regarded as a part of self-knowledge. Prediger, Roth

and Noeth (1973), agree with this, stating that self-knowledge is about knowing and understanding your aptitude, interests and personality. A career counselling intervention with the aim of increasing self-knowledge should therefore at least place a focus on personality, aptitude and interests since these play such an important role in making a career decision.

It is very difficult to define personality since it is not a concrete phenomenon. People differ about how they define personality since personality is much too complex to constrain it in only one definition. From an organisational perspective, personality is crucial when it comes to selection since it has been found on numerous occasions that personality has an effect on job performance. The reason for this is that personality predicts and explains behaviour at work (Barrick & Mount, 2005). It is therefore understandable that personality should also form part of a career counselling intervention. If an individual can be helped to select the right occupation from the start, employers would find it much easier to employ applicants whose personality matches the requirements of the job and it would consequently lead to enhanced job performance. Gunkel, Schlaegel, Langella and Peluchette (2010) further add that personality and vocational psychology are also linked through the application of many vocational models, which builds on the fact that career development can be seen as an extension of personality. This implies that a person's career choice and development are greatly influenced by personality. For the purposes of this study, personality will be defined as the characteristics of a person that account for consistent patterns of feeling, thinking and behaving (Pervin, Cervone & John, 2005).

The aptitude one possesses links with person-job fit, as mentioned earlier. The trait-and-factor theory, as well as the work adjustment theory, also touched on this. Jobs require certain skills from a person that are linked with aptitude. The aptitude of numerical ability, for instance, is crucial for an occupation in accounting. To fit the job requirements and specification, an individual must possess the correct aptitude to be able to do the job. It is therefore important for learners in school to be aware of what their aptitudes are, since that will have an influence on the career choices they make. According to Reber (1995), aptitude is defined as an individual's potential for performance, or the possibility of the individual being trained up to a specified level of ability. Intelligence tests, for example, are ability tests. In the context of the

learners, having knowledge of one's aptitude, specifically through the subtest of spatial reasoning, is very valuable as it relates to one's learning potential or potential to learn new information. According to Carrol (1993), spatial reasoning refers to an individual's ability to manipulate visual patterns, indicated by the difficulty level as well as the complexity of the visual stimulus, and his/her success in doing that, without looking at the speed of doing it. Being good in spatial ability is associated with success when it comes to cognitively demanding educational tasks and occupations (Bingham, 1973; Smith, 1964; Snow & Yalow, 1982; Vernon, 1961).

Interests form an important aspect to include in a career counselling intervention since self-knowledge with regard to interests helps an individual to actively start thinking about further studies and a possible career that links with his/her interests (Chuenyane, 1983). It is important for learners to translate their interests into an occupational choice (Ginzberg, 1966). Vocational interests have incremental validity over and above cognitive ability when it comes to the prediction of occupational choices which further motivates the decision to include an interest measure (Robertson, Smeets, Lubinski & Benbow, 2010). It was also found that interests have a correlation of .60 with career choice, which indicates that interest forms an important part of making a career choice (Tracey & Hopkins, 2001). Following a career that interests you is very important for life satisfaction and adequate knowledge therefore is of great concern (Super, 1984). Interests are a familiar theme to include in a career counselling intervention since it forms such an important part of choosing a career (Kay, 2011). Interests are defined as a loose term which has been used at one time or another to imply all of the following: attention, curiosity, motivation, focus, concern, goal-directedness, awareness, worthiness and desire (Reber, 1995).

In summary it can be concluded that, since the increase of self-knowledge was the outcome of this intervention, it was important to include personality, aptitude and interests in the assessment battery as part of the intervention.

One might now ask the question whether one can assume that a learner with sound self-knowledge will eventually make a career choice. Even though this learner is well informed and will be able to make an informed choice, does he/she have the agency or willpower to use the self-knowledge in order to make a choice? It might therefore

also be necessary to focus on agency/willpower in a career counselling intervention. The goal of this career counselling intervention was to enhance self-knowledge and to assist learners in making an informed career choice. However, some level of agency/willpower in the learner is necessary in order to determine whether or not the learner is motivated to take action and make a career choice and therefore some focus was also placed on this aspect, although limited.

Bandura (2001) defines agency as a mixture of human capacity and potential that supports a person to implement some control over his/her own life. Cochran and Laub (1994) define agency in a life-career context as a combination of human intention and action which results in making things happen. The concept of agency is rooted in Bandura's social cognitive theory and has received a fair amount of attention in the last couple of years, especially in vocational and career psychology (Chen, 2006). In short, agency refers to an individual's intention to make future plans and act upon it (Chen, 2006). Agency/willpower is a necessary requirement for people to act on the goals that they have set for themselves (Luthans, 2002). In order to have agency/willpower, one must believe that you are able to reach your goals. It is therefore important to set realistic goals for yourself. The SMART (Specific, Measurable, Attainable, Relevant and Time-bound) goal-setting guideline can assist one with this. It is a relatively easy guideline to follow and also a guideline that is easy to remember, which made it ideal to use as part of the intervention. According to Creating S.M.A.R.T. Goals (2014) one must ask the following questions to set a specific goal:

- Who: Who is involved?
- What: What do I want to accomplish?
- Where: Where should the goal take place?
- When: When should the goal be accomplished?
- Which: Identify requirements and constraints.
- Why: Specific reasons, purpose or benefits of accomplishing the goal.

In order to set goals that are measurable, one must institute definite criteria according to which progress can be measured. The goal should be set in such a way that it is possible to determine when the goal has been accomplished. Attainable

goals are goals for which you know you have the capacity to develop the necessary skills and requirements to accomplish the goals, in other words, it involves being realistic. A relevant goal must be in line with your overall goal. If you are setting goals for your career, it would, for example, be irrelevant to include a goal in this process such as redecorating your room. Time-bound goals should have a begin date as well as an end date. If one is not specific in terms of time, it will be much too easy to postpone the goal. Setting SMART goals can therefore assist one in developing a sense of agency for acting on those goals.

Chen (2006) states that one of the main tasks of career counselling should be to develop the intention that will provide participants with the necessary tools to create/develop their own agency. According to Marques and Lopez (2011), strategies to do this include:

- Learners must be encouraged to develop goals that are based on internal and personal standards rather than on developing goals that are based on external standards such as those of friends, for example.
- Goals must be developed that build on previous achievements and performances.
- Learners must understand the importance of positive talk when it comes to goal-setting. It is important for them to encourage themselves from the beginning.
- The process of goal setting should be enjoyed and learners should be encouraged to learn through the process.

If a sense of agency or willpower can be developed, the chances will be higher that the learners will act on their newly acquired self-knowledge and make a career choice. Agency was not explicitly measured or tested in this intervention, but during the feedback session goal setting was one of the topics that was discussed as it can have a positive influence on one's level of agency. Therefore, even though it was not measured, the concept of agency was also touched on. This will be discussed later in more detail.⁴

⁴ The author again notes the second factor, namely career maturity, which was also measured by the questionnaire as indicated through the statistical analysis. The focus on agency could have had an influence on career maturity.

Self-efficacy, together with agency/willpower, is as an important aspect to discuss when it comes to career choice and career counselling. Self-efficacy refers to an individual's belief about his/her own capabilities in performing tasks and can therefore be referred to as perceived self-efficacy (Bandura, 1986). The way you think about yourself mediates the relationship between knowledge and taking action. Blustein, McWirther and Perry (1989) state that one's commitment to a career choice is based on self-knowledge regarding one's skills, interests and abilities and should be seen as an essential developmental task of late adolescence and early adulthood. According to Armstrong and Vogel (2009), self-efficacy is a significant variable when it comes to the foundational development of career aspirations and career interests. It is a motivational factor that plays an important role in goal achievement (Barnir, Watson, & Hutchins, 2011). Together with exposure to role models, self-efficacy can affect career choice intention. Savenye (1990) has stated that social learning theorists promote Bandura's opinion that modelling of desired behaviours can be used to change attitudes. According to Hackett, Esposito and O'Halloran (1989), it has been found that perceptions about role models influence career attitudes. Taking this into account, it is valuable for learners to determine, if they have any role models, why they have these role models and if their role models might possibly influence their career choice. According to Barnir et al. (2011), role models who provide guidance and even training can lead to an increase in confidence, resulting in higher self-efficacy. It is perhaps necessary to define role models in order to correctly understand the value thereof. According to the Oxford Dictionaries website (2014), a role model is defined as "A person looked to by others as an example to be imitated". Role models with whom learners can identify, together with access to career information, guest speakers and job-shadowing opportunities, should all form part of career education strategies, as these aspects can assist learners in making a career choice (Cilliers, 1993; Leonard & Vriend, 1975).

In career counselling, learners have to be assisted in developing a realistic level of self-efficacy. This can be done through focusing on performance accomplishments, vicarious learning and modelling, as well as through verbal persuasion (Bacanli, 2006). According to Bandura (1982), it is important to have an accurate judgement of one's self-efficacy because it influences the choices one makes as well as the

amount of effort and persistence one displays in challenging times. This is especially relevant in previously disadvantaged communities where financial challenges very often introduce a hindering factor when it comes to career choice. A learner with high perceptions about his/her self-efficacy will invest more effort in overcoming challenges, thus leading to agency, as a choice is actively being made and followed.

2.6 The career counselling intervention

The career counselling intervention, had to be developed by taking the aforementioned information into consideration.

2.6.1 Design of the career counselling intervention

According to Sewel, Haller and Portes (1969), a career counselling intervention that is intended for learners from previously disadvantaged communities should focus on the following aspects:

- Motivate and encourage learners to make use of the opportunities that are available to them relating to education and careers.
- Focus on self-knowledge which includes interests, values, needs, aptitude and personality.
- Knowledge about the world of work, information about different career options and the requirements for following those careers, information regarding tertiary institutions and possible financial assistance options.
- Integration of the information and knowledge.
- Assist learners with decision making.
- Focus on and assist learners with career planning as well as the overcoming of obstacles that may prevent them from achieving their goals.

The above-mentioned guidelines were perused and certain elements were selected which were focused on specifically in this intervention; as such, the focus was not necessarily on all aspects.

The focus of the career counselling intervention was on helping the learners to learn more about their personality, interests and aptitude and in doing so to assist them to correlate this self-knowledge with a broader scope of possible career choices and to set goals for themselves for the future. As discussed earlier, self-knowledge plays a

critical role in job fit and thus in the choice of the right occupation. Personality, interests and abilities each play a unique role in gaining self-knowledge and it is therefore important to pay attention to each one of them. The intervention that was utilised in this research consisted of two contact sessions, spaced two weeks apart. A two week period between the sessions were opted for in order to account for a potential validity threat, namely test-retest selection bias. During the first session, the learners completed a battery of psychometric tests consisting of the (1) 16 Personality Factor Questionnaire (5th edition), (2) the Meyer Interest 10 Questionnaire, and (3) the Differential Aptitude Test. The Differential Aptitude Test consists of several subtests of which only a selected number were utilised due to time constraints. In the second session the learners each received a workbook which was used when feedback on their results was given to them. The outcome of the second session was aimed to help the learners understand the profiles with which they were presented, which were based on the psychometric tests they had completed, for them to make more informed career choices.

The decision of the psychometric instrument was based on the psychometric properties of each test, as well as the suitability of the test for the purposes of the intervention.

The 16 Personality Factor (16PF) questionnaire was developed by Cattel and is a comprehensive measure of normal range personality (Cattell & Mead, 2008). Personality is defined as a multi-level, hierarchical structure consisting of primary factors and second-order global measures that describe personality at a broader, conceptual level (Cattel & Mead). The primary factors focus more on the finer details and those qualities that make an individual unique and are more powerful in predicting the behaviour of an individual. The questionnaire was adapted for the South African population, which made it a relevant test to use for this intervention. The test is reliable since its use yields satisfactory levels of internal reliability coefficients. Even though 10 of the primary scales yielded values below .70, only four of them were below .65. It is also a valid measure to use with statistical results showing a factor loading greater than .34. Since the test is reliable, it means that all the items in the questionnaire measure the same personality construct. Validity refers to the fact that the test is measuring what it is intended to measure, in other words, personality (16PF, 2006). The fifth edition of the test was used, this being the

latest edition available. An advantage of the fifth edition is that a very large norm group (N = 2538) was utilised in its standardisation. The 16PF questionnaire takes 45 minutes to complete.

Aptitude was measured with the Differential Aptitude Test Form K. The Differential Aptitude Test focuses on a broad variety of information and abilities (Cohen & Swerdlik, 2002). The measurement of aptitude allows us to predict broader characteristics. Three subtests were utilised in the intervention, namely the "verbal reasoning test", the "non-verbal reasoning test" and the "space relations test". The goal of the verbal reasoning test is to measure general reasoning by means of verbal material. The non-verbal reasoning test is utilised in order to measure general reasoning by means of using non-verbal material and the spatial relations test's goal is to measure the three-dimensional spatial relations ability of a learner. Each of the three subtests takes 25 minutes to complete. One of the advantages is that norm tables are available against which the performance of the learners can be compared. It is thus possible to know how the learner performs in comparison to what is expected of a learner at that specific age. Bernard and Naylor (1982) argue that focusing on aptitude during career counselling is very important due to the strong link that aptitude has with performance.

The test yields very good reliability coefficients for the Grade 11 norm group with all the values equal to or greater than .80, meaning that all the items were measuring the same construct (Coetzee & Vosloo, 2006). The test is also found to be valid with correlation values being significant at the 0.05 and 0.01 level. The sample on which the norm group was developed consisted of 4956 learners from Grade 10 to 12. A convenience sample was used, which implies that the norm group cannot be seen as 100% representative.

The Meyer Interest 10 Questionnaire consists of 10 fields of interest which are linked with broader career areas. The ten fields are as follows: 1) Preference for working with individuals or small groups of people; 2) Preference for working with people in groups and for performing in public; 3) Preference for business activities; 4) preference for numbers; 5) Linguistic preference: Preference for reading and writing; 6) Artistic preference or preference for art and art appreciation; 7) preference for practical work (handwork and machines/working with machines); 8), Preference for

natural sciences and work in the physical sciences; 9) Preference for animals, animal-related and other related biological-scientific work; and 10) Preference for plants, plant-related and horticultural work. The goal of the questionnaire is to assist Grade 9 and 11 learners in making subject and career choices. The norm groups for the test was developed after testing the MB10 on a sample of 776 Grade 9 learners, 778 Grade 11 learners and 1913 first-year university students. These learners were found in schools in the Southern and Western Cape. Reliability coefficients of greater than .65 were found for the items, with the exclusion, however, of two fields when conducted with African learners. This was due to the fact that no Xhosa version of the questionnaire is available and they struggled with understanding some of the concepts in English (Meyer, 2011). In order to accommodate this problem, explanatory words were added to the questionnaire in order to assist learners who struggle with language difficulties. Validity was determined by internal consistency and item analyses. Internal consistency was found to be significant with all fields yielding results of larger than 0.8, except for two fields with results of 0.67 and 0.73, which still is significant. The results of the item analysis also led to the conclusion that the test is reliable since values of larger than 0.6 were found. The test takes 35 minutes to complete.

The workbook was specifically developed for the intervention and was used as a guide during the feedback session. The feedback session began with a short explanation regarding the planned outcomes of the session followed by an ice breaker activity. It was explained to the learners that the outcomes of the session were to increase their level of self-knowledge with regard to their personality, aptitude and interests, so that they would be able to make a more informed career choice. They were then asked to share their expectations of the intervention. In the ice breaker activity the learners had to form groups of five to seven. One learner in each group was selected to receive a note with an occupation written on it. The learner did not know what was written on the note and had to ask the group members yes/no questions in order to determine which occupation was written on his/her note. This proved to be great fun and the learners happily engaged in this activity. Before giving feedback on the psychometric results to be discussed, the learners were asked to write down three words each to describe themselves. This was followed by asking whether they thought other people saw them as they

described themselves. As one is always quick to criticise oneself, they were asked to write down one characteristic that they regarded as their best characteristic. The last question in this section asked them what occupation they would choose if they had to make a choice right there.

Aptitude was discussed first, with each subtest discussed separately. The construct aptitude was first explained, after which general feedback and explanations regarding their results took place. After each subtest was discussed, the learners were asked to reflect on their results in order to make sure that they understood it. Time was also allowed for them to ask questions in terms of their results.

The next section in the workbook dealt with Personality. Learners were asked to describe their personality in their own words before looking at their results. The learners only received feedback on their global factors, which were explained by making use of scenarios such as the following and then comparing their answers to their results:

Scenario 1: After a long day at school where you were among people all the time, one of your friends invites you to accompany him and some other friends for a visit to the home a friend. What do you decide to do? Why?

Short definitions regarding the global factors were provided in the workbook and space was left for the learners to comment on their results.

The feedback regarding interests took place in a similar format. Their workbooks contained a table presenting the different items of the MB10 and a short definition of each. The learners had to look at their profile sheet and then circle their own items in the workbook. These definitions were found in the manual of the MB10. In their feedback, examples of possible occupations were listed and they were asked whether or not they would consider following some of the careers listed. This was only to facilitate discussion and to provide some examples. As there are so many different options to choose from, it was not possible to list all the possible occupations.

The whole feedback session was personalised by asking questions in the workbook and inviting learners to share some of their responses. As mentioned, this was done to assist with the internalisation process and also to ascertain that the feedback was understood.

That having a role model can also be valuable when it comes to choosing a career was briefly discussed earlier. In previously disadvantaged communities in South Africa, the effect of Apartheid is still present in the sense that few people have had the opportunity to receive tertiary education. For children in previously disadvantaged schools, it can be especially valuable to identify role models in their community who have risen above their circumstances to become successful. These individuals can be seen as an inspiration to the learners as they set examples for how to plan a career and which actions to take in order to accomplish goals.

In order to initiate thinking regarding role models, a short section in the workbook was allocated to this topic and learners were also motivated to be a role model to others. Learners were asked what, according to them, a role model is and then also who their role model was, and why. Furthermore, the learners were asked whether they thought that having a role model had value or not, and to explain their responses.

The focus was on career planning and goal setting in order to assist the learners in taking action to make a career choice, thus referring to agency.⁵ It was explained to them that it is very important to start thinking about the future and to visualise where they would like to be in a few years' time. If they knew where they were heading, it would be easier to set goals in order to realise their dreams. The discussion was made practical by asking them the following question:

What is your vision for the future? Where do you see yourself after Grade 12?

Goal setting was also discussed earlier, specifically setting a goal by making use of the SMART approach. Learners were motivated to set short-term goals with the aim of eventually achieving their long-term vision. It was explained that they, on reaching these short-term goals, could add new goals in order to reach their ideals. They then had to set two goals for themselves for their Grade 11 year by making use of the SMART approach, in other words setting goals that are specific, measureable, realistic, relevant/attainable and time bound. The goal of the workbook was to

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⁵ Career maturity was also developed through this section.

actively engage the learners in the feedback session in order to assist them with the internalising of the information. Questions such as the following were therefore asked:

- Which steps will you have to take to reach these goals?
- Which obstacles may make it difficult to reach your goals?
- How may you be able to overcome these obstacles?

Financial constraints often are one of the obstacles that learners from previously disadvantaged schools encounter and therefore it was important to address this issue. Again, role models from their environment can be especially relevant when it comes to motivation for overcoming obstacles as such role models have encountered similar obstacles.

At the end of the session, information was provided about where to find more information regarding further studies, costs and possible occupations. This was done to provide the learners with more tools for making an informed career choice and to assist them in finding help in terms of obtaining bursaries and addressing their uncertainties in terms of entry requirements.

Finally, it was stressed to the learners that, When they choose an occupation, it is important to select a direction that suits the kind of person that they are. Their self-knowledge – in other words, their knowledge of their personality, interests and aptitude – should be helpful in this regard. It therefore is very important to be sure of exactly what an occupation or a career field involves before deciding to select it. If they have compared themselves with possible occupations and have identified some that might suit them, they should start thinking about possible options that they could follow to enable them to follow that occupation.

2 Week period in between sessions

The whole process can be portrayed as follows:

Session 2 Session 1 **Test Group** (Psychometric Intervention (Halfday Post-test (Selfassessments: workshop, feedback knowledge discussions) 16PF, DAT questionnaire) Pre-test (Selfknowledge subtests, MB10) questionnaire) Post-test (Self-Control Group knowledge questionnaire)

Figure 2.2 Research Process

Career counselling based on valid and reliable information is of great importance if the desired outcome is for learners to make an informed career choice. Decisions based on wrong or incomplete information will most probably result in ill-informed decisions. It was vital that the information that was conveyed to the learners had to be reliable and valid, as well as of use to the learners. The author in this case, but the career counsellor in general, has to realise the great responsibility he/she has in providing the best available knowledge and information to the learner, so that the learner can make a good choice that is based on a valid and reliable foundation. This is especially true if such a career intervention is the only support a learner will receive regarding a career choice. The Health Professions Council of South Africa (HPCSA) also has a strict code of conduct which should be adhered to at all times and providing reliable and valid information also forms a part of this.

2.6.2 Measurement instrument

As mentioned, the intervention was ultimately designed with the goal of increasing self-knowledge. The success thereof – in other words, measuring whether or not self-knowledge did increase following the intervention – was measured through the use of a self-knowledge questionnaire. This questionnaire was adapted from the Career Development Questionnaire developed by R. Langley (1990) and distributed

by Mindmuzik Media. It is a registered psychometric test at the Health Professions Council of South Africa. A further discussion on the measurement instrument is presented in Chapter 3.

2.7 Impact of the intervention

The goal of any intervention is to lead to a change in one or more selected constructs, in other words, to have an impact. The ideal impact for this intervention would be that the learners' self-knowledge would increase and that they would have a better idea about a possible career to follow; in other words, that they would be sensitised towards careers. The impact of this study is probably internal to each learner, namely the self-knowledge that they are provided with. Introspection is required from the learners, as it has been found that awareness of self-knowledge can be increased through introspection, and more accurate self-judgements can be made (Silvia & Gendolla, 2001). Self-report formats are used at times in this intervention and therefore introspection is required in order to give information that is not directly observable by others, but only available to the self (Wallendorf & Brucks, 1993).

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

The main aim of this study was to empirically evaluate the impact of a career counselling intervention on the self-knowledge (regarding interests, personality and aptitude) of Grade 11 learners. This chapter provides an overview of all the procedures that were followed to accomplish this aim.

However, it is as important to have a contextual understanding regarding the chosen research methodology. In order to do this the first parts of Chapter 3, therefore, presents a review of evaluation research as the preferred research design for this study in the context of what it is and the purpose thereof, and by identifying the types of evaluation studies.

3.2 Evaluation Research

In order to evaluate the impact of any structured social intervention, it is necessary to understand the concept of evaluation research. Evaluation research, also known as programme research, refers to a research purpose rather than to a specific research method. A key element of all evaluation studies is the intervention that is being evaluated since many different methods of intervention can be used. The field of evaluation research has become more and more popular, indicating a trend in the social sciences (Babbie & Mouton, 2001). This trend reflects social scientists' real desire to make an actual difference in the world with which they interact professionally, but it also illustrates the relevance of using evaluation research as a preferred instrument (Babbie & Mouton).

Rutman (1984) describes programme research as the use of scientific methods to measure the implementation and outcomes of programmes for decision-making purposes. Rossi and Freeman (1982) define evaluation research as "...the systematic application of social research procedures for assessing the conceptualization, design, implementation and utility of a programme".

3.2.1 The purpose of evaluation research

When one chooses to do evaluation research, it will be for a specific purpose that cannot be realised by conducting another type of research. According to Patton (1990), the purpose of evaluation research can be reduced to a maximum of three main reasons;

- to make judgements of merit or worth,
- to improve programmes and
- to generate knowledge

If one were to accept this viewpoint as a relevant point of reference, it follows that, for this study, the purpose of using evaluation research would be to make judgements about the merit or worth of the career counselling intervention utilised in this research. Judgement-oriented evaluations are also the most often used reason for conducting an evaluation study. Certain questions are addressed when conducting judgement-oriented evaluation research. These questions ask whether the intervention was successful, whether the objectives were achieved, whether it was effective and whether the intended target group was reached (Babbie & Mouton, 2001). Improvement-oriented evaluations are used for, as the name suggests, improving interventions/programmes. The information may be relevant for later studies conducted as follow-up studies, given the outcome of the initial intervention research. Both judgement- and improvement-orientated studies are driven by concerns for the use and application of a particular intervention. In the case of the current study it implies both;

- a judgement regarding the effectiveness of a single intervention to evaluate whether a once-off career counselling intervention on Grade 11 learners had an influence on their self-knowledge;
- and/or the basis to evaluate whether the intervention could be improved in future studies to be conducted.

Knowledge-oriented evaluations are used to generate new knowledge by improving our understanding of how programmes work and how people might possibly change their behaviour, following the (successful) intervention (Babbie & Mouton, 2001). Given this interpretation, the current study falls outside of the definition.

3.2.2 The types of evaluation studies

Furthermore, different types of evaluation studies can be conducted. Rossi and Freeman (1982) identified three classes of evaluation studies, namely:

- Analysis, which is related to the conceptualisation and design of interventions
- The monitoring of programme implementation
- The assessment of programme effectiveness and efficiency.

This study could probably be classified as an evaluation study that covers both the conceptualisation and design of the intervention as well as the assessment of the programme effectiveness.

3.3 Research design and hypothesis

A quantitative research design was used in this study; consequently, questionnaires were used to gather data. The study also made use of a controlled experimental design with a one-group pre-test, post-test design. In this design, learners were given a pre-test which served as a dependent variable, after which they received a stimulus (in this case feedback from the psychometric tests) which was seen as the independent variable. The post-test, which again served as the dependent variable, was then given to measure the learners' responses. A two-group design (consisting of an experimental and a control group) was utilised.

Given that the aim of the study was to empirically evaluate the impact of a career counselling intervention on the self-knowledge (regarding interests, personality and aptitude) of Grade 11 learners, the following hypothesis was developed:

Hypothesis 1: Self-knowledge would increase significantly following participation in the career counselling intervention.⁶

⁶ A second hypothesis was also tested, even though it was not the initial intention. The second hypothesis was "Career maturity would increase significantly following participation in the career counselling intervention."

3.4 Sampling design

As explained in paragraph 2.4, career counselling in Grade 11 is valuable since it cooccurs with the time when learners have to start making a career choice. Career counselling at this age can assist the learner in making a more informed career choice. It is for this reason that Grade 11 learners formed the population for this intervention.

A convenience sample was used because limited resources were available and it was necessary to keep costs as low as possible. Two schools were selected to form part of the study. They will henceforth be referred to as School A and School B. Both these schools are situated in Newton, outside Wellington, and have not yet received any similar interventions.

Due to the nature of the sampling procedure, it cannot be claimed that the sample is representative of the population. This is a limitation of the research that should be considered when the results are interpreted.

3.5 Ethics

Before the intervention took place, permission had to be gained from the Department of Education (DOE) to conduct research at the school. In order to gain permission, a brief summary and motivation for the study was provided to the Department. The letter of permission that was received from the DOE was then presented to the schools, together with a letter that was addressed to the schools' governing bodies to ask for their permission to conduct the research at their school. Letters were then sent out to the parents of the Grade 11 learners, asking their consent for including their children in the study (Appendix A). Finally, the Grade 11 learners themselves were also asked to complete an informed assent form indicating their willingness to participate in the study (Appendix B). Study participants/learners were informed that their involvement in the study was completely voluntary and that they could withdraw at any stage without any repercussions. The learners were also given the option of receiving the career counselling without forming part of the study per se. This information was contained in the consent forms that each learner completed prior to the study.

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As mentioned earlier, the process was overseen by a registered Industrial Psychologist, as required by the Health Professions Council of South Africa. Psychometrists (independent practice) and intern Industrial psychology students administered the tests at the schools. Correct procedures were followed during test administration, scoring and feedback, as specified according to the ethical rules, regulations and policy guidelines booklets from the Health Profession's Council of South Africa's (HPCSA) documentation website.

The Stellenbosch University Ethics Committee was approached for ethical clearance of the study and all research information was held in strict confidence, in accordance with the ethical requirements as stipulated by Stellenbosch University, as well as the Ethical Code of the Health Professions Council of South Africa.

As part of the commitment made to the schools, and for providing equal opportunities to all the learners, the control group will also receive career counselling before the end of the year.

3.6 The intervention

In order to test the change in self-knowledge regarding personality, interest and aptitude, a questionnaire (discussed in more detail in the next session) was developed on the basis of the Career Development Questionnaire which is distributed by Mindmuzik Media. This questionnaire was given to the learners for completion on two occasions: before commencing with the intervention and after the feedback session.

Before the intervention took place, a pilot study was conducted to test the effectiveness of the developed questionnaire. The pilot study was not conducted on learners from the same socio-economic environment as the sample groups. This should be taken into account. The questionnaire was found to be ready for use as the learners rated the questions as clear and understandable.

The first scheduled session involved the learners in completing the 16 Personality Factor questionnaire, subtests of the Differential Aptitude Test (Verbal reasoning, Non-verbal reasoning and Spatial Reasoning) and the Meyers Interest questionnaire.

In preparation for the second session, the respective scores of each learner were evaluated and summarised in a two-page feedback document. These results were then made available to each learner during the second session. Together with the individual results, each learner also received a workbook specifically designed for the intervention.

Psychometrists (independent practice) and intern Industrial Psychology students acted as facilitators and guided the learners through the workbook in a group session with the goal to help them understand their feedback better and to enhance their self-knowledge. This part of the intervention was of great importance since the possible increase in self-knowledge depended on the understanding that the learners gained from this session. There was time for the learners to ask questions and the facilitators helped these learners individually. However, because of time constraints, most of the interaction was group-based. The workbook also placed focus on goal setting and learners were showed practically how to set goals for the future. Furthermore, the learners were provided with information about where to gain information about tertiary institutions, courses, contact numbers, etc. and this was then discussed with the learners. The facilitators gave further advice as to where to gain experience and some learners also shared some of their own experiences about what they had already done to gain exposure to different careers or what they were planning to do.

After the second session was completed, learners again received the specifically developed questionnaire aimed at measuring the concept of self-knowledge.

The classes were randomly divided into a test and control group with the use of a class list. The test group received the full intervention, whereas the control group only completed the self-knowledge questionnaire. They and the test group completed the questionnaires at the same time. (As mentioned above, the control group will be provided with the same opportunity to enhance their self-knowledge, when the full intervention is presented to them at a later stage. This was not to form part of the data for this thesis or have any effect on it.)

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3.7 Measurement instrument

As mentioned earlier, a self-knowledge questionnaire was developed using the Career Development Questionnaire developed by Mindmuzik Media as a guideline. The questionnaire was used to measure the level of self-knowledge of the learners before and after the intervention took place.

The questionnaire comprises 35 questions, starting with seven biographical questions which form section A. Section B comprises questions aimed at measuring self-knowledge. This section consists of 28 questions. From among the 28 questions, the following were taken directly from the Career Development Questionnaire:

- Items: 11, 12, 13, 15, 17, 18, 20, 21, 22, 25, 28, 31, 32, 33, 34

The following item was adapted from the Career Development Questionnaire:

- Item: 35

The rest of the items were self-developed:

- Items: 8, 9, 10, 14, 16, 19, 23, 24, 26, 27, 29, 30

Examples of the self-developed questions are as follows:

- I do not always understand myself.
- I think it is important to know oneself before making a career choice.

Section A aimed to obtain the following information:

- Q1: Name & surname
- Q2: Gender
- Q3: Age
- Q4: Ethnicity
- Q5: Name of school
- Q6: Parents' job (open-ended question)
- Q7: Home Language

Section B (Q8-Q35) asked questions aimed at measuring self-knowledge. Respondents were asked to answer questions in Section B on a 4-point Behavioural Observation Scale (BOS) ranging from "Completely disagree" to "Completely agree". According to Latham and Wexley (1994), the BOS is similar to a Likert scale since a number of behavioural statements are used to refer to a specific object/theme, which is then presented in a frequency or 'strength" scale. Although a BOS usually comprises a 5-point or larger scale, a 4-point scale was used in this instance to avoid the possibility of learners choosing a "neutral" position.

Before using it on the test and control groups, the questionnaire was tested and evaluated in an informal pilot study to make sure that it was ready for use. The questionnaire takes approximately 15 minutes to complete, but 10 additional minutes were allowed to accommodate all, leading to a total of 25 minutes. During the intervention, it was found that 15 minutes was more than enough time for all of the learners. The questionnaire is available in both English and Afrikaans.

3.8 Reliability and dimensionality of the measurement instrument

In order to determine the reliability of the measurement instrument, a reliability analysis was conducted on the instrument, both in test 1 and 2. The result of the analysis of test 1, as shown in Table 3.1, indicates that a Cronbach's Alpha of .839 was obtained for the full-scale reliability, which is acceptable since it approximates .7 (Nunnally, 1967). A Cronbach Alpha of .843 was obtained for test 2, as indicated in Table 3.2, which is again acceptable since it approximates .7 (Nunnally).

The results of the reliability analysis for test 1 shown in Table 3.1 indicated that nine questions were flagged as possible poor items. Questions 10, 11, 12, 13, 17, 20, 24, 26 and 29 were flagged due to the fact that their Corrected Item-Total Correlation was lower in comparison with the correlations of the other items which all ranged between .2 and .6. The results, as shown in Table 3.2, indicated that four questions were flagged as possible poor items in test 2. Questions 9, 13, 17 and 20 were flagged since their Corrected Item-Total Correlations were also lower in comparison with the correlations of the other items, which all ranged between .1 and .6. Since questions 13, 17 and 20 were flagged in both analyses, one can assume that these

questions had a stronger probability of being poor items and did not really contribute to the questionnaire.

Table 3.1 Reliability analysis for test 1

| | Item Total Correlation | Alpha if deleted | |
|------------------------|------------------------|------------------|--|
| Question 8 | .45 | .83 | |
| Question 9 (reversed) | .25 | .84 | |
| Question 10 | .10 | .84 | |
| Question 11 | .01 | .84 | |
| Question 12 (reversed) | 01 | .85 | |
| Question 13 | .05 | .84 | |
| Question 14 | .67 | .82 | |
| Question 15 (reversed) | .62 | .82 | |
| Question 16 (reversed) | .68 | .82 | |
| Question 17 (reversed) | .01 | .84 | |
| Question 18 (reversed) | .42 | .83 | |
| Question 19 | .31 | .83 | |
| Question 20 (reversed) | .07 | .85 | |
| Question 21 (reversed) | .43 | .83 | |
| Question 22 | .48 | .83 | |
| Question 23 | .42 | .83 | |
| Question 24 | .06 | .84 | |
| Question 25 | .41 | .83 | |
| Question 26 | .03 | .84 | |
| Question 27 | .51 | .83 | |
| Question 28 (reversed) | .45 | .83 | |
| Question 29 | .12 | .84 | |
| Question 30 | .56 | .83 | |
| Question 31 | .43 | .83 | |
| Question 32 | .57 | .83 | |
| Question 33 (reversed) | .32 | .84 | |
| Question 34 | .65 | .82 | |
| Question 35 (reversed) | .59 | .82 | |

Table 3.2 Reliability analysis for test 2

| Table 3.2 Nellability analysis for t | Item Total Correlation | Alpha if deleted | |
|--------------------------------------|------------------------|------------------|--|
| Question 8 (test 2) | .47 | .83 | |
| Question 9 (test 2) (reversed) | .10 | .85 | |
| Question 10 (test 2) | .16 | .84 | |
| Question 11 (test 2) | .18 | .84 | |
| Question 12 (test 2) (reversed) | .24 | .84 | |
| Question 13 (test 2) | .02 | .85 | |
| Question 14 (test 2) | .53 | .83 | |
| Question 15 (test 2) (reversed) | .69 | .83 | |
| Question 16 (test 2) (reversed) | .54 | .83 | |
| Question 17 (test 2) (reversed) | 19 | .85 | |
| Question 18 (test 2) (reversed) | .4 | .84 | |
| Question 19 (test 2) | .22 | .84 | |
| Question 20 (test 2) (reversed) | 04 | .85 | |
| Question 21 (test 2) (reversed) | .45 | .84 | |
| Question 22 (test 2) | .44 | .84 | |
| Question 23 (test 2) | .36 | .84 | |
| Question 24 (test 2) | .42 | .84 | |
| Question 25 (test 2) | .54 | .83 | |
| Question 26 (test 2) | .34 | .84 | |
| Question 27 (test 2) | .53 | .83 | |
| Question 28 (test 2) (reversed) | .41 | .84 | |
| Question 29 (test 2) | .26 | .84 | |
| Question 30 (test 2) | .58 | .83 | |
| Question 31 (test 2) | .45 | .84 | |
| Question 32 (test 2) | .49 | .83 | |
| Question 33 (test 2) (reversed) | .48 | .83 | |
| Question 34 (test 2) | .53 | .83 | |
| Question 35 (test 2) (reversed) | .62 | .83 | |

Exploratory Factor Analysis was conducted to investigate the dimensionality of the scale. A parallel analysis was used prior to the Exploratory Factor Analysis to determine the number of factors. The Eigenvalue greater than 1 rule was not strictly followed in this analysis. According to Norman (1988), the Eigenvalue-greater-thanone rule states that the number of reliable factors is equal to the number of eigenvalues greater than one. Eigenvalues less than one means, that the scores on that specific component would have a negative reliability. However, this is only one method for determining how many factors to retain. Figure 3.1 indicates the scree plot that was generated for test 1 with the blue line representing the actual data and the red line indicating the simulated data. The rule of thumb was followed, which is to identify the actual data factors that lie above the simulated data. Three factors and possibly a fourth were identified, as can be seen in the figure.

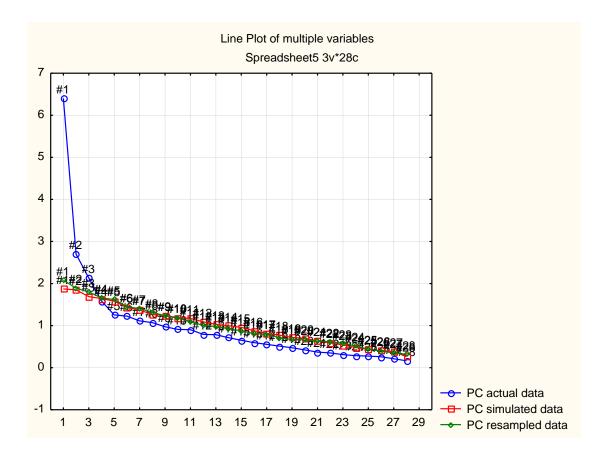


Figure 3.1 Scree plot of Parallel Analysis for test 1

The percentage of variance explained by the factors can be seen in Table 3.3. Three factors explained 40% of the variance whereas 46% of the variance was explained when a fourth factor was added. It was therefore decided to keep the fourth factor. In effect, this means that, in test 1, the questionnaire, instead of only measuring one factor as the intention was, possibly measured four factors.

Table 3.3 Table showing variance explained in the 4 factors for test 1

| Value | Eigenvalue | % Total variance | Cumulative | Cumulative % |
|-------|------------|------------------|------------|--------------|
| | | | Eigenvalue | |
| 1 | 6.40 | 22.87 | 6.4 | 22.87 |
| 2 | 2.7 | 9.64 | 9.1 | 32.51 |
| 3 | 2.13 | 7.61 | 11.23 | 40.12 |
| 4 | 1.59 | 5.66 | 12.82 | 45.78 |

The next step was to determine the factor loadings in order to determine what they had assessed. This was done by looking at the results shown in Table 3.4. The results are discussed together with the results from test 2.

Table 3.4 Oblimin rotations of test 1

| Question 8 (test 1) .25 .72 .01 .05 Question 9 (test 1) 04 .47 .1 .24 (reversed) | Table 3.4 Oblimin rot | ations of test 1 | | | | |
|--|-----------------------|------------------|----------|----------|----------|--|
| Question 9 (test 1) -0.04 | | | Factor 2 | Factor 3 | Factor 4 | |
| (reversed) Question 10 (test 1)11 | | | | .01 | .05 | |
| Question 10 (test 1) -1.11 .13 .38 .21 Question 12 (test 1) .07 .05 .62 .14 Question 12 (test 1) .22 .41 .07 .13 (reversed) Question 13 (test 1) | Question 9 (test 1) | 04 | .47 | .1 | .24 | |
| Question 11 (test 1) 07 .05 .62 14 Question 12 (test 1) .22 41 .07 13 (reversed) | | | | | | |
| Question 12 (test 1) .22 41 .07 13 (reversed) Question 13 (test 1) 2 .17 15 .55 Question 14 (test 1) .74 .29 12 01 Question 15 (test 1) .76 2 .13 .07 (reversed) .09 03 .18 Question 16 (test 1) .72 .07 03 .18 (reversed) .09 46 .28 (reversed) .09 46 .28 (reversed) .09 46 .28 Question 18 (test 1) .66 04 21 11 (reversed) .09 .44 16 Question 19 (test 1) .41 08 .44 16 Question 20 (test 1) .11 24 .21 .09 Question 21 (test 1) .63 .05 06 14 (reversed) .0 .5 .16 .09 Question 22 (test 1) .27 .65 .16 .09 Question 23 (test 1) | | 11 | | .38 | .21 | |
| Creversed Question 13 (test 1) -2 .17 .15 .55 .55 Question 14 (test 1) .74 .29 .12 .01 . | Question 11 (test 1) | 07 | | .62 | 14 | |
| Question 13 (test 1) 2 .17 15 .55 Question 14 (test 1) .74 .29 12 01 Question 15 (test 1) .76 2 .13 .07 (reversed) | Question 12 (test 1) | .22 | 41 | .07 | 13 | |
| Question 14 (test 1) .74 .29 12 01 Question 15 (test 1) .76 2 .13 .07 (reversed) .09 03 .18 (reversed) .09 46 .28 (reversed) .09 46 .28 Question 18 (test 1) .66 04 21 11 (reversed) .09 46 .28 Question 19 (test 1) .41 08 .44 16 Question 20 (test 1) .11 24 .21 .09 (reversed) .00 .0 06 14 (reversed) .00 .0 .0 14 (reversed) .00 .5 .00 .0 Question 22 (test 1) .27 .65 .16 .09 Question 23 (test 1) .23 .35 .31 .17 Question 25 (test 1) .33 .53 .02 .03 Question 26 (test 1) .15 .12 .74 .17 Question 27 (test 1) .47 | (reversed) | | | | | |
| Question 15 (test 1) .76 2 .13 .07 (reversed) .07 03 .18 (reversed) .09 46 .28 (reversed) .09 46 .28 (reversed) .09 46 .28 (reversed) .00 21 11 (reversed) .01 .41 08 .44 16 Question 19 (test 1) .41 08 .44 16 Question 20 (test 1) .11 24 .21 .09 (reversed) .09 .06 14 .09 Question 21 (test 1) .63 .05 06 14 (reversed) .09 .09 .00 .00 .00 .00 Question 22 (test 1) .27 .65 .16 .09 .00 Question 23 (test 1) .23 .35 .31 .17 Question 25 (test 1) .33 .53 .02 .03 Question 26 (test 1) .47 .5 .13 .13 .13 < | Question 13 (test 1) | | | 15 | .55 | |
| (reversed) Question 16 (test 1) .72 .07 03 .18 (reversed) Question 17 (test 1) .06 .09 46 .28 (reversed) Question 18 (test 1) .66 04 21 11 (reversed) Question 19 (test 1) .41 08 .44 16 Question 20 (test 1) .11 24 .21 .09 (reversed) .09 .06 14 Question 21 (test 1) .63 .05 06 14 (reversed) .00 .5 .06 14 (reversed) .09 .09 .09 .09 Question 22 (test 1) .27 .65 .16 .09 .09 Question 23 (test 1) .23 .35 .31 .17 .09 Question 24 (test 1) .06 .0 .5 .07 .07 .03 Question 25 (test 1) .47 .5 .13 .13 .17 .18 Question 27 (test 1) .47 .5 .13 .13 .13 .13 </th <th>Question 14 (test 1)</th> <th>.74</th> <th></th> <th>12</th> <th>01</th> <th></th> | Question 14 (test 1) | .74 | | 12 | 01 | |
| Question 16 (test 1) .72 .07 03 .18 (reversed) .06 .09 46 .28 (reversed) .08 .09 46 .28 (reversed) .00 .09 46 .28 (reversed) .00 .21 11 (reversed) .09 .44 16 Question 20 (test 1) .11 24 .21 .09 (reversed) .09 .06 06 14 (reversed) .05 06 14 Question 21 (test 1) .63 .05 06 14 (reversed) .09 .09 .09 .09 .09 Question 22 (test 1) .27 .65 .16 .09 .09 Question 23 (test 1) .23 .35 .31 .17 Question 24 (test 1) .06 .0 .5 .07 Question 25 (test 1) .33 .53 .02 .03 Question 27 (test 1) .47 .5 .13 .13 Question | Question 15 (test 1) | .76 | 2 | .13 | .07 | |
| (reversed) .06 .09 46 .28 (reversed) .06 .09 46 .28 Question 18 (test 1) .66 04 21 11 (reversed) .09 .44 16 Question 19 (test 1) .11 24 .21 .09 (reversed) .09 .00 .09 .14 (reversed) .00 .05 .06 .14 (reversed) .02 .06 .0 .5 .07 Question 23 (test 1) .23 .35 .31 .17 Question 24 (test 1) .06 .0 .5 .07 Question 25 (test 1) .33 .53 .02 .03 Question 26 (test 1) .15 .12 .74 .17 Question 27 (test 1) .47 .5 .13 13 Question 28 (test 1) .54 .01 .17 .18 (reversed) .02 .11 .8 Question 32 (test 1) .47 .48 .02 .11 Questi | | | | | | |
| Question 17 (test 1) .06 .09 46 .28 (reversed) .06 04 21 11 (reversed) .08 .44 16 Question 19 (test 1) .41 08 .44 16 Question 20 (test 1) .11 24 .21 .09 (reversed) .09 .09 .14 .16 (reversed) .05 06 14 .17 Question 22 (test 1) .27 .65 .16 .09 Question 23 (test 1) .23 .35 .31 .17 Question 24 (test 1) .06 .0 .5 .07 Question 25 (test 1) .33 .53 02 03 Question 26 (test 1) .47 .5 .13 13 Question 28 (test 1) .54 01 17 .18 (reversed) .04 .31 .52 09 Question 30 (test 1) .47 .48 .02 .11 Question 32 (test 1) .5 .03 .23 .41 < | | .72 | .07 | 03 | .18 | |
| (reversed) Question 18 (test 1) .66 04 21 11 (reversed) Question 19 (test 1) .41 08 .44 16 Question 20 (test 1) .11 24 .21 .09 (reversed) Question 21 (test 1) .63 .05 06 14 (reversed) Question 22 (test 1) .27 .65 .16 .09 Question 23 (test 1) .23 .35 .31 .17 Question 24 (test 1) 06 .0 .5 .07 Question 25 (test 1) .33 .53 02 03 Question 26 (test 1) 15 12 .74 .17 Question 27 (test 1) .47 .5 .13 13 Question 28 (test 1) .54 01 17 .18 (reversed) Question 29 (test 1) .04 .31 .52 09 Question 30 (test 1) .47 .48 .02 .11 Question 32 (test 1) .5 .03 .23 .41 Question 33 (test 1) .4 | | | | | | |
| Question 18 (test 1) .66 04 21 11 (reversed) .41 08 .44 16 Question 20 (test 1) .11 24 .21 .09 (reversed) .09 .06 14 (reversed) .00 .05 06 14 (reversed) .02 .06 .01 .09 Question 22 (test 1) .27 .65 .16 .09 Question 23 (test 1) .23 .35 .31 .17 Question 24 (test 1) 06 .0 .5 .07 Question 25 (test 1) .33 .53 .02 .03 Question 26 (test 1) 15 12 .74 .17 Question 27 (test 1) .47 .5 .13 13 Question 28 (test 1) .54 01 17 .18 (reversed) .02 .11 .09 Question 30 (test 1) .47 .48 .02 .11 Question 32 (test 1) .5 .03 .23 .41 | Question 17 (test 1) | .06 | .09 | 46 | .28 | |
| (reversed) Question 19 (test 1) .41 08 .44 16 Question 20 (test 1) .11 24 .21 .09 (reversed) .05 06 14 Question 21 (test 1) .63 .05 06 14 (reversed) .00 .05 06 14 Question 22 (test 1) .27 .65 .16 .09 Question 23 (test 1) .23 .35 .31 .17 Question 24 (test 1) 06 .0 .5 .07 Question 25 (test 1) .33 .53 02 03 Question 26 (test 1) 15 12 .74 .17 Question 27 (test 1) .47 .5 .13 13 Question 28 (test 1) .54 01 17 .18 (reversed) .04 .31 .52 09 Question 30 (test 1) .47 .48 .02 .11 Question 31 (test 1) .18 07 .1 .8 Question 32 (test 1) .49 54 | (reversed) | | | | | |
| Question 19 (test 1) .41 08 .44 16 Question 20 (test 1) .11 24 .21 .09 (reversed) | Question 18 (test 1) | .66 | 04 | 21 | 11 | |
| Question 20 (test 1) .11 24 .21 .09 (reversed) .05 06 14 (reversed) .09 .00 .16 .09 Question 22 (test 1) .27 .65 .16 .09 Question 23 (test 1) .23 .35 .31 .17 Question 24 (test 1) 06 .0 .5 .07 Question 25 (test 1) .33 .53 02 03 Question 26 (test 1) 15 12 .74 .17 Question 27 (test 1) .47 .5 .13 13 Question 28 (test 1) .54 01 17 .18 (reversed) .02 .11 Question 30 (test 1) .47 .48 .02 .11 Question 31 (test 1) .18 07 .1 .8 Question 32 (test 1) .5 .03 .23 .41 Question 33 (test 1) .49 54 04 .36 (reversed) .20 .42 Question 35 (test 1) .74 | (reversed) | | | | | |
| (reversed) Question 21 (test 1) .63 .05 06 14 (reversed) 00 .65 .16 .09 Question 22 (test 1) .23 .35 .31 .17 Question 24 (test 1) .06 .0 .5 .07 Question 25 (test 1) .33 .53 02 03 Question 26 (test 1) 15 12 .74 .17 Question 27 (test 1) .47 .5 .13 13 Question 28 (test 1) .54 01 17 .18 (reversed) Question 29 (test 1) 04 .31 .52 09 Question 30 (test 1) .47 .48 .02 .11 Question 31 (test 1) .18 07 .1 .8 Question 32 (test 1) .5 .03 .23 .41 Question 33 (test 1) .49 54 04 .36 (reversed) Question 34 (test 1) .56 .12 .02 .42 Question 35 (test 1) .74 .1 .05 07 | Question 19 (test 1) | .41 | 08 | .44 | 16 | |
| Question 21 (test 1) .63 .05 06 14 (reversed) .00 .65 .16 .09 Question 23 (test 1) .23 .35 .31 .17 Question 24 (test 1) 06 .0 .5 .07 Question 25 (test 1) .33 .53 02 03 Question 26 (test 1) 15 12 .74 .17 Question 27 (test 1) .47 .5 .13 13 Question 28 (test 1) .54 01 17 .18 (reversed) .02 .11 Question 29 (test 1) 04 .31 .52 09 Question 30 (test 1) .47 .48 .02 .11 Question 31 (test 1) .18 07 .1 .8 Question 32 (test 1) .5 .03 .23 .41 Question 33 (test 1) .49 54 04 .36 Question 34 (test 1) .56 .12 .02 .42 Question 35 (test 1) .74 .1 05 07 </th <th>Question 20 (test 1)</th> <th>.11</th> <th>24</th> <th>.21</th> <th>.09</th> <th></th> | Question 20 (test 1) | .11 | 24 | .21 | .09 | |
| (reversed) Question 22 (test 1) .27 .65 .16 .09 Question 23 (test 1) .23 .35 .31 .17 Question 24 (test 1) 06 .0 .5 .07 Question 25 (test 1) .33 .53 02 03 Question 26 (test 1) 15 12 .74 .17 Question 27 (test 1) .47 .5 .13 13 Question 28 (test 1) .54 01 17 .18 (reversed) Question 29 (test 1) 04 .31 Question 30 (test 1) .47 .48 Question 31 (test 1) .18 07 | (reversed) | | | | | |
| Question 22 (test 1) .27 .65 .16 .09 Question 23 (test 1) .23 .35 .31 .17 Question 24 (test 1) 06 .0 .5 .07 Question 25 (test 1) .33 .53 02 03 Question 26 (test 1) 15 12 .74 .17 Question 27 (test 1) .47 .5 .13 13 Question 28 (test 1) .54 01 17 .18 (reversed) .02 .11 Question 30 (test 1) .47 .48 .02 .11 Question 31 (test 1) .18 07 .1 .8 Question 32 (test 1) .5 .03 .23 .41 Question 33 (test 1) .49 54 04 .36 (reversed) .12 .02 .42 Question 35 (test 1) .74 .1 05 07 | Question 21 (test 1) | .63 | .05 | 06 | 14 | |
| Question 23 (test 1) .23 .35 .31 .17 Question 24 (test 1) 06 .0 .5 .07 Question 25 (test 1) .33 .53 02 03 Question 26 (test 1) 15 12 .74 .17 Question 27 (test 1) .47 .5 .13 13 Question 28 (test 1) .54 01 17 .18 (reversed) .04 .31 .52 09 Question 30 (test 1) .47 .48 .02 .11 Question 31 (test 1) .18 07 .1 .8 Question 32 (test 1) .5 .03 .23 .41 Question 33 (test 1) .49 54 04 .36 (reversed) .9 .54 04 .36 Question 34 (test 1) .56 .12 .02 .42 Question 35 (test 1) .74 .1 05 07 | (reversed) | | | | | |
| Question 24 (test 1) 06 .0 .5 .07 Question 25 (test 1) .33 .53 02 03 Question 26 (test 1) 15 12 .74 .17 Question 27 (test 1) .47 .5 .13 13 Question 28 (test 1) .54 01 17 .18 (reversed) .04 .31 .52 09 Question 30 (test 1) .47 .48 .02 .11 Question 31 (test 1) .18 07 .1 .8 Question 32 (test 1) .5 .03 .23 .41 Question 33 (test 1) .49 54 04 .36 (reversed) .9 .42 .02 .42 Question 35 (test 1) .74 .1 .05 07 | Question 22 (test 1) | .27 | .65 | .16 | .09 | |
| Question 25 (test 1) .33 .53 02 03 Question 26 (test 1) 15 12 .74 .17 Question 27 (test 1) .47 .5 .13 13 Question 28 (test 1) .54 01 17 .18 (reversed) .04 .31 .52 09 Question 30 (test 1) .47 .48 .02 .11 Question 31 (test 1) .18 07 .1 .8 Question 32 (test 1) .5 .03 .23 .41 Question 33 (test 1) .49 54 04 .36 (reversed) Question 34 (test 1) .56 .12 .02 .42 Question 35 (test 1) .74 .1 05 07 | Question 23 (test 1) | .23 | .35 | .31 | .17 | |
| Question 26 (test 1) 15 12 .74 .17 Question 27 (test 1) .47 .5 .13 13 Question 28 (test 1) .54 01 17 .18 (reversed) .02 .11 Question 30 (test 1) .47 .48 .02 .11 Question 31 (test 1) .18 07 .1 .8 Question 32 (test 1) .5 .03 .23 .41 Question 33 (test 1) .49 54 04 .36 (reversed) Question 34 (test 1) .56 .12 .02 .42 Question 35 (test 1) .74 .1 05 07 | | 06 | .0 | .5 | .07 | |
| Question 27 (test 1) .47 .5 .13 13 Question 28 (test 1) .54 01 17 .18 (reversed) .18 .19 09 Question 29 (test 1) 04 .31 .52 09 Question 30 (test 1) .47 .48 .02 .11 Question 31 (test 1) .18 07 .1 .8 Question 32 (test 1) .5 .03 .23 .41 Question 33 (test 1) .49 54 04 .36 (reversed) .12 .02 .42 Question 35 (test 1) .74 .1 05 07 | Question 25 (test 1) | .33 | | 02 | | |
| Question 28 (test 1) .54 01 17 .18 (reversed) .02 09 Question 30 (test 1) .47 .48 .02 .11 Question 31 (test 1) .18 07 .1 .8 Question 32 (test 1) .5 .03 .23 .41 Question 33 (test 1) .49 54 04 .36 (reversed) Question 34 (test 1) .56 .12 .02 .42 Question 35 (test 1) .74 .1 05 07 | Question 26 (test 1) | 15 | | .74 | .17 | |
| (reversed) Question 29 (test 1) 04 .31 .52 09 Question 30 (test 1) .47 .48 .02 .11 Question 31 (test 1) .18 07 .1 .8 Question 32 (test 1) .5 .03 .23 .41 Question 33 (test 1) .49 54 04 .36 (reversed) .12 .02 .42 Question 35 (test 1) .74 .1 05 07 | Question 27 (test 1) | .47 | .5 | .13 | 13 | |
| Question 29 (test 1) 04 .31 .52 09 Question 30 (test 1) .47 .48 .02 .11 Question 31 (test 1) .18 07 .1 .8 Question 32 (test 1) .5 .03 .23 .41 Question 33 (test 1) .49 54 04 .36 (reversed) .12 .02 .42 Question 35 (test 1) .74 .1 05 07 | Question 28 (test 1) | .54 | 01 | 17 | .18 | |
| Question 30 (test 1) .47 .48 .02 .11 Question 31 (test 1) .18 07 .1 .8 Question 32 (test 1) .5 .03 .23 .41 Question 33 (test 1) .49 54 04 .36 (reversed) .9 .42 Question 34 (test 1) .56 .12 .02 .42 Question 35 (test 1) .74 .1 05 07 | | | | | | |
| Question 31 (test 1) .18 07 .1 .8 Question 32 (test 1) .5 .03 .23 .41 Question 33 (test 1) .49 54 04 .36 (reversed) .36 .12 .02 .42 Question 35 (test 1) .74 .1 05 07 | | 04 | | | 09 | |
| Question 32 (test 1) .5 .03 .23 .41 Question 33 (test 1) .49 54 04 .36 (reversed) .36 .12 .02 .42 Question 35 (test 1) .74 .1 05 07 | Question 30 (test 1) | .47 | .48 | .02 | .11 | |
| Question 33 (test 1) .49 54 04 .36 (reversed) Question 34 (test 1) .56 .12 .02 .42 Question 35 (test 1) .74 .1 05 07 | Question 31 (test 1) | .18 | | .1 | .8 | |
| (reversed) Question 34 (test 1) .56 .12 .02 .42 Question 35 (test 1) .74 .1 05 07 | Question 32 (test 1) | | .03 | .23 | .41 | |
| Question 34 (test 1) .56 .12 .02 .42 Question 35 (test 1) .74 .1 05 07 | Question 33 (test 1) | .49 | 54 | 04 | .36 | |
| Question 35 (test 1) .74 .10507 | | | | | | |
| | | .56 | .12 | .02 | .42 | |
| (reversed) | Question 35 (test 1) | .74 | .1 | 05 | 07 | |
| (10101000) | (reversed) | | | | | |

Parallel Analysis was conducted again to investigate the dimensionality of the scale in test 2. The Eigenvalue-greater-than-1 rule was again not strictly followed in this analysis. Figure 3.2 indicates the scree plot that was generated for test 2 with the blue line representing the actual data and the red line indicating the simulated data. Following the rule of thumb, four factors were identified. Table 3.5 indicates that four factors explain 48% of the variance.

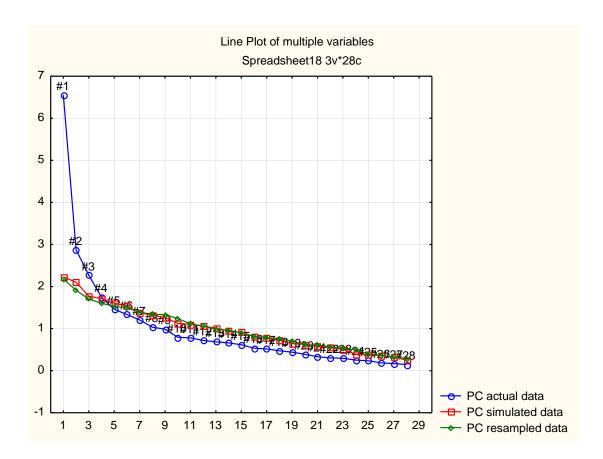


Figure 3.2 Scree plot of Parallel Analysis for test 2

Table 3.5 Table showing variance explained in the four factors for test 2

| Eigenvalue | % Total variance | Cumulative | Cumulative % |
|------------|----------------------|--------------------------------------|---|
| | | Eigenvalue | |
| 6.55 | 23.39 | 6.55 | 23.39 |
| 2.87 | 10.26 | 9.42 | 33.65 |
| 2.27 | 8.1 | 11.69 | 41.75 |
| 1.75 | 6.25 | 13.44 | 48 |
| | 6.55 2.87 2.27 | 6.55 23.39 2.87 10.26 2.27 8.1 | Eigenvalue 6.55 23.39 6.55 2.87 10.26 9.42 2.27 8.1 11.69 |

The factor loadings in Table 3.6 were then evaluated together with the factor loadings of test 1 shown in Table 3.3, to determine whether acceptable themes could be linked with the four factors and whether the same factors were highlighted. Different questions loaded on three of the factors, whereas almost the same questions loaded on one factor. It was found that the three factors were all very similar in nature and could be classified as questions pertaining to "self-knowledge". The fourth factor related to "career maturity". Even though four factors had been identified through the dimensionality analysis, only two meaningful themes could be linked with the factors. In effect this means that the Self-knowledge Questionnaire

actually measured two factors, rather than only one, namely "self-knowledge" and "career maturity". This will be discussed in more detail in Chapter 4.

Table 3.6 Oblimin rotations of test 2

| Table 3.6 Oblimin rota | Factor 1 | Factor 2 | Factor 3 | Factor 4 |
|------------------------|----------|----------|----------|----------|
| Question 8 (test 1) | .05 | .36 | .35 | .45 |
| Question 9 (test 1) | 05 | 02 | .52 | .18 |
| (reversed) | | | | |
| Question 10 (test 1) | 12 | .5 | 39 | .04 |
| Question 11 (test 1) | 2 | .24 | 38 | .29 |
| Question 12 (test 1) | .35 | .07 | 37 | 03 |
| (reversed) | | | | |
| Question 13 (test 1) | .05 | .09 | .39 | 07 |
| Question 14 (test 1) | .56 | .07 | .36 | .19 |
| Question 15 (test 1) | .78 | 17 | 17 | .07 |
| (reversed) | | | | |
| Question 16 (test 1) | .55 | 19 | 1 | .35 |
| (reversed) | | | | |
| Question 17 (test 1) | 03 | .67 | .05 | .19 |
| (reversed) | | | | |
| Question 18 (test 1) | .6 | 09 | 11 | .09 |
| (reversed) | | | | |
| Question 19 (test 1) | .07 | .73 | .04 | 16 |
| Question 20 (test 1) | .07 | .04 | 61 | 07 |
| (reversed) | | | | |
| Question 21 (test 1) | .85 | .03 | .08 | 18 |
| (reversed) | | | | |
| Question 22 (test 1) | .03 | 02 | .25 | .64 |
| Question 23 (test 1) | .04 | .3 | .15 | .27 |
| Question 24 (test 1) | 02 | .66 | .06 | .23 |
| Question 25 (test 1) | .1 | .03 | .36 | .66 |
| Question 26 (test 1) | 02 | .7 | .09 | .09 |
| Question 27 (test 1) | .16 | .09 | .16 | .57 |
| Question 28 (test 1) | .69 | 07 | .23 | 04 |
| (reversed) | | | | |
| Question 29 (test 1) | 03 | .55 | 03 | .08 |
| Question 30 (test 1) | .32 | .56 | .24 | .2 |
| Question 31 (test 1) | .02 | 12 | 22 | .76 |
| Question 32 (test 1) | .01 | .1 | 15 | .73 |
| Question 33 (test 1) | .41 | 04 | 42 | .33 |
| (reversed) | | | | |
| Question 34 (test 1) | .11 | .09 | 06 | .63 |
| Question 35 (test 1) | .63 | .22 | 13 | .11 |
| (reversed) | | | | |

3.9 Statistical analysis followed

According to J. M. Kidd (personal communication, July 18, 2013), mixed model repeated measures ANOVA was the best analysis to be used for the data analysis and this was consequently executed., The interaction effect between group and time was investigated specifically to evaluate whether the intervention had an impact on the experimental group different to what was observed in the control group. A 5% significance level was used as guideline for significant results (Babbie & Mouton, 2001).

CHAPTER 4

RESULTS

4.1 Introduction

The objectives of this study were to develop and design a career guidance intervention for Grade 11 learners; develop a questionnaire to assess self-knowledge on personality, interests and aptitude; and empirically evaluate the impact of the intervention on the self-knowledge (regarding personality, interests and aptitude) of the Grade 11 learners at two Western Cape high schools. This chapter presents a discussion of the empirical results of the impact of the intervention that were obtained in this research.

4.2 Sample

Questionnaires were administered to 136 Grade 11 learners in the participating high schools in Wellington. Demographical data were obtained from the questionnaires as well as data with regard to self-knowledge. Through the dimensionality analysis that was performed, it was found that a second factor, namely career maturity, had also been measured. This is discussed in more depth at later stage.

Based on the descriptive statistics, the mean age (n = 136) of the learners was 16 years with a standard deviation of .825. The ages were distributed between 15 and 19 years as shown in Figure 4.1. The gender distribution presented in Figure 4.2 indicates that 39% of the learners were male and 61% were female. According to the ethnicity distribution displayed in Figure 4.3, 4% of the learners were black, 1% was Indian and 94% were coloured. Home languages are displayed in Figure 4.4. Most of the learners (88%) indicated that their home language is Afrikaans, 7% are English-speaking and 5% are Xhosa-speaking. As indicated in Figure 4.5, 36% of the learners formed part of the control group and 64% formed part of the test group. The distribution between the participating schools is shown in Figure 4.6: 52% of the learners were from School B and 48% from School A.

The descriptive statistics for the sample is presented in Figures 4.1 to 4.6

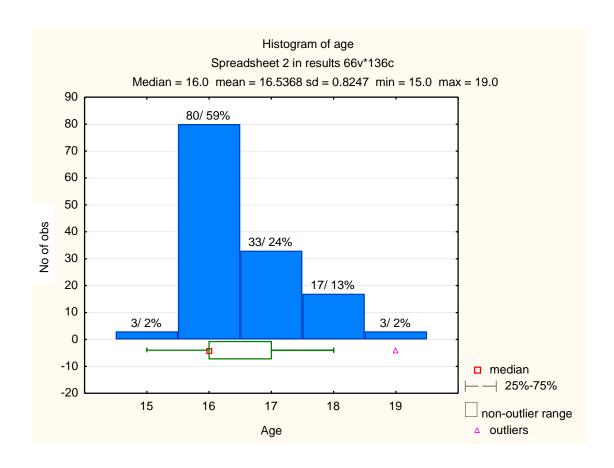


Figure 4.1 Age distribution

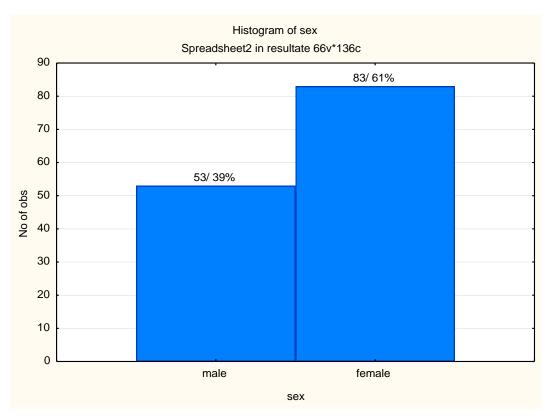


Figure 4.2 Gender Distribution

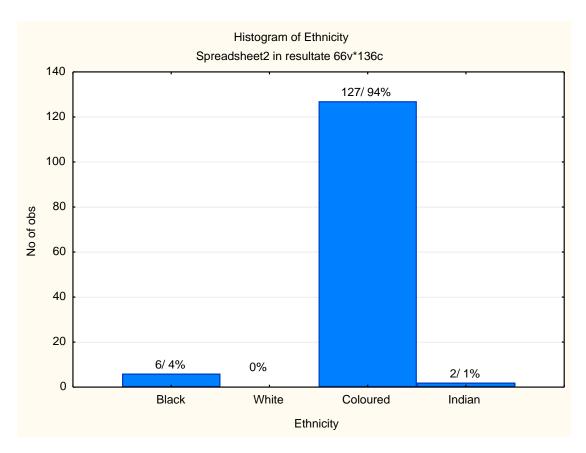


Figure 4.3 Ethnicity Distribution

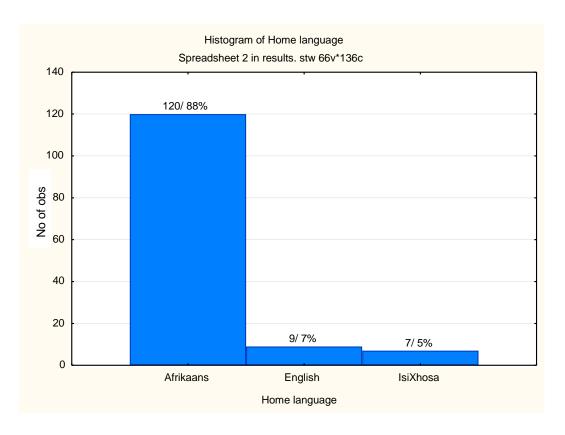


Figure 4.4 Home Language Distribution

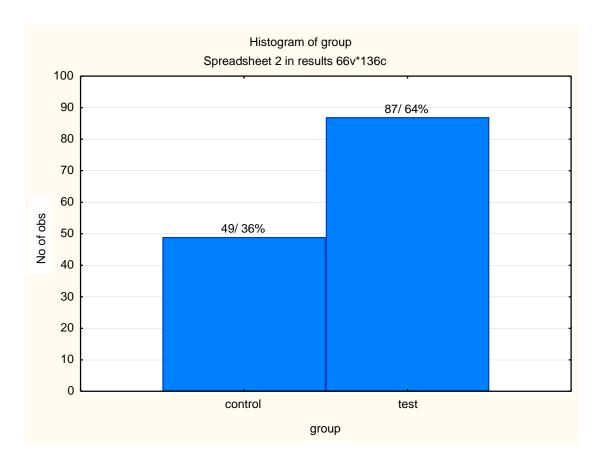


Figure 4.5 Group Distribution

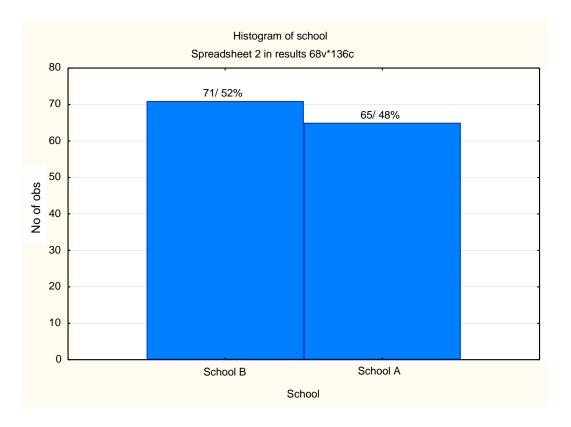


Figure 4.6 School Distribution

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Since the population did not consist of an equal number of learners from each school and an equal number of boys and girls, it was decided to test whether or not school and or/gender played a role in the effect of the intervention. A Fixed Effect test was conducted to test for this. The results are shown in Table 4.1. Three hypotheses were consequently tested, namely:

Hypothesis 1: Change over time is not dependent on school, sex and group at the same time.

Hypothesis 2: Change over time is not dependent on both school and group.

Hypothesis 3: Change over time is not dependent on both gender and group.

The results indicate that all three of these hypotheses were found to be non-significant. Hypothesis 1 resulted in a non-significant p-value of .324, indicating that it can be accepted that change over time is not dependent on school, gender and group at the same time. A p-value of .58 was found for Hypothesis 2, which was also non-significant, meaning that one can state that change over time is not dependent on both school and group. Hypothesis 3 resulted in a p-value of .526, also non-significant; accepting the hypothesis that change over time is not dependent on both gender and group. These results have indicated that neither school nor gender had an effect on the results.

Table 4.1 Fixed Effect Test for Self-knowledge (Selfkennis)

| Effect | Р |
|--------------------------|------------------|
| Group | .8 |
| Time | .00 |
| Gender | .52 |
| School | .42 |
| group*time | .00 |
| group*gender | .05 |
| group*school | .21 |
| gender*time | .92 |
| school*time | .13 |
| gender*school | .03 |
| group*gender*time | <mark>.53</mark> |
| group*school*time | <mark>.58</mark> |
| group*gender*school | .06 |
| gender*school*time | .76 |
| group*gender*school*time | <mark>.32</mark> |

4.3 Evaluation of the intervention

The initial aim of this research was to investigate whether a career counselling intervention had an influence on Grade 11 learners' level of self-knowledge, but the results found through the dimensionality analysis indicated that another construct was also measured. The additional construct measured career choice/knowledge. This construct's questions were aimed to determine whether the learners have already made a career choice; whether they were thinking about a possible career choice; and what knowledge they had with regard to the career choice they have to make. This construct could possibly be linked with agency/willpower, as discussed earlier.

Two assessments were conducted; one before the intervention and one after the feedback session. The expectation was that there would be an increase in the learners' level of self-knowledge due to their exposure to the intervention.

4.3.1 Self-knowledge

Regarding self-knowledge, the following hypothesis was proposed:

Hypothesis 1: Self-knowledge would increase significantly following participation in the career counselling intervention.

A Repeated Measures Analysis of Variance was performed on the data in which two effects were tested: a group effect as well as a time effect and, specifically, a group and time interaction effect. The hypothesis to test for this was the following: The difference between the first test and second test is the same between the two groups. Based on the results of this analysis, as can be seen in Table 4.2, the p-value for the group and time interaction effect was < 0.01, which is highly significant since it is smaller than .05. One can therefor reject the hypothesis that the difference between the first test and second test was the same between the two groups. The results indicated that the level of self-knowledge of the test group, who received the intervention, had changed whereas the level of self-knowledge of the control group, who received no intervention, showed no change.

Table 4.2 Fixed Effect test for Self-knowledge (Selfkennis)

| Effect | Р |
|------------|-----|
| Group | .63 |
| Time | .00 |
| group*time | .00 |

In order to determine the direction of the change, Figure 4.7, in which the blue line represents the control group and the red line the test group, was inspected. One could see here that the level of self-knowledge of the control group remained approximately the same from test 1 to test 2, whereas an increase in self-knowledge from test 1 to test 2 can be seen in the test group. The next step was to determine the significance of this change, as well as to determine whether the averages differed significantly from one another. Post-hoc tests were then conducted.

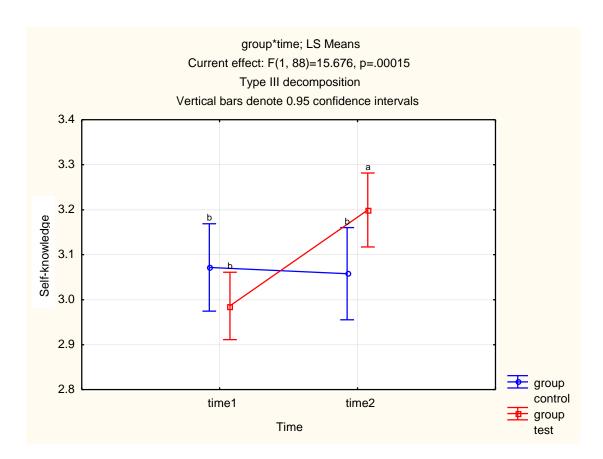


Figure 4.7 Group*Time Effect

Table 4.3 Probabilities for Post Hoc Tests

| Cell No. | Group | Time | {1} 3.07 | {2} 3.06 | {3} 2.99 | {4} 3.2 |
|----------|---------|--------|-------------|-------------|-------------|------------|
| 1 | Control | time 1 | | .75 | .17 | .05 |
| 2 | Control | time 2 | .75 | | .27 | .04 |
| 3 | Test | time 1 | .17 | .27 | | .00 |
| 4 | Test | time 2 | .05 | .04 | .00 | |

Table 4.3 displays the results of the post hoc tests that were conducted. Four averages are shown here. When all were compared with one another in different combinations, but not all of them were of interest for the purposes of this analysis. The following sub-hypotheses were developed:

- At time 1 the averages of group 1 and group 2 were the same
- At time 2 the averages of group 1 and group 2 were the same
- The averages were the same for the control group at time 1 and time 2
- The averages were the same for the test group at time 1 and time 2

In order to compare the control group's time 1 with time 2, row 1 and column 2 were looked at, which revealed a p-value of .75. This result was insignificant since it was larger than .05, meaning that change from time 1 to time 2 in the control group was not statistically meaningful. For the test group, row 3 and column 4 were inspected. The result was a p-value of p < 0.01, which was highly significant since it was smaller than .01. This meant that the test group's level of self-knowledge increased significantly from test 1 to test 2, making the intervention successful. Referring back to Figure 4.7, this was indicated by the letters "a" and "b" where "a" indicated a significant change between two points (p < .05) and "b" indicated that an insignificant change was found between two points (p > .05). The three means labelled "b" were therefor not significantly different, and the one mean labelled "a" was significantly different to the three means mentioned previously. One could now see that there was no significant change between the test and control group at time 1, whereas there was a significant change between group 1 and group 2 at time 2. The same could be seen when the results of the test group for time 1 and 2 were compared. A significant change (p < .05) could be seen, indicating that there was a significant increase in self-knowledge.

4.3.2 Career maturity

The results of the statistical analysis indicated that the intervention had a positive effect on the learners' thoughts and readiness to make a career choice, as well as on their knowledge about careers, thus referring to career maturity.

Even though the idea was not to explicitly test change in career maturity, it was briefly discussed in the intervention and could possibly have contributed to the increase in this construct. It should be noted, however, that the original Career Development Questionnaire is intended to measure career maturity, and since questions of the Questionnaire were used, it makes sense that this construct came to the fore through the statistical analysis.

4.3.3 Open-ended questions

Question 6 in the questionnaire was an open-ended question enquiring "what jobs do your parents do?" The responses of the learners were categorised under different themes based on their answers.

The results of the test group (n = 87) were as follows:

Eight of the 87 learners, gave no response regarding their fathers' occupations whereas seven gave no response regarding their mothers' occupations. The occupation frequencies reported for the occupations of the test group's parents are displayed in Tables 4.4 and 4.5.

Table 4.4 Frequencies of Fathers' Careers in Test Group

| Theme | Frequency | Percentage | Cumulative Frequency |
|-----------------------|-----------|------------|----------------------|
| Assistant | 1 | 1.15% | 1.15% |
| Handy man | 1 | 1.15% | 2.3% |
| Unemployed | 11 | 12.64% | 14.94% |
| Restaurant Manager | 1 | 1.15% | 16.09% |
| Translator | 1 | 1.15% | 17.24% |
| General Labourer | 9 | 10.34% | 27.58% |
| Deceased | 7 | 8.05% | 35.63% |
| Taxi Driver | 5 | 5.75% | 41.38% |
| Truck Driver | 4 | 4.6% | 45.98% |
| Supervisor | 2 | 2.3% | 48.28% |
| Security Guard | 1 | 1.15% | 49.43% |
| Policeman | 1 | 1.15% | 50.58% |
| Wine Certifier | 1 | 1.15% | 51.73% |
| Plant grower | 1 | 1.15% | 52.88% |
| Electrician | 2 | 2.3% | 55.18% |
| Cleaner | 1 | 1.15% | 56.33% |
| Plumber | 1 | 1.15% | 57.48% |
| Printer | 1 | 1.15% | 58.63% |
| Administration | 2 | 2.3% | 60.93% |
| | | | |

| Welder | 1 | 1.15% | 62.08% |
|------------------------|---|-------|--------|
| Chairman | 1 | 1.15% | 63.23% |
| Fisherman | 2 | 2.3% | 65.53% |
| Salesman | 1 | 1.15% | 66.68% |
| Operator | 3 | 3.45% | 70.13% |
| Safety Inspector | 1 | 1.15% | 71.28% |
| Engineer | 1 | 1.15% | 72.43% |
| Entrepreneur | 1 | 1.15% | 73.58% |
| Mechanic | 1 | 1.15% | 74.73% |
| Construction Worker | 1 | 1.15% | 75.88% |
| Gardener | 1 | 1.15% | 77.03% |
| Car dealer | 1 | 1.15% | 78.18% |
| Spray painter | 2 | 2.3% | 80.48% |
| Farm Worker | 3 | 3.45% | 83.93% |
| Painter | 3 | 3.45% | 87.38% |
| Transporter | 1 | 1.15% | 88.53% |
| Builder | 1 | 1.15% | 89.68% |
| Caretaker | 1 | 1.15% | 90.83% |
| No response | 8 | 9.2% | 100% |

As one can see, the largest percentage of the test group's fathers were Unemployed (12.64%), with the second largest percentage working as General labourers (10.34%). Most of the occupations can be classified as unskilled, semi-skilled and skilled occupations with only a few being classified as professional occupations.

| Assistant 1 1.15% 1.15% Assistant 1 1.15% 1.15% Housewife 21 24.14% 25.29% Unemployed 16 18.4% 43.69% Manager 1 1.15% 44.84% Nurse 7 8.05% 52.89% General Labourer 1 1.15% 54.04% Deceased 1 1.15% 55.19% Clerk 2 2.3% 57.49% Factory Worker 3 3.45% 60.94% Supervisor 1 1.15% 62.09% Crèche Teacher and Owner 2 2.3% 64.39% Policewoman 1 1.15% 65.54% Cashier 3 3.45% 68.99% Chef 1 1.15% 70.14% Secretary 2 2.3% 72.44% Cleaner 4 4.6% 77.04% Farm Worker 1 1.15% 78.19% Block Woman 1 1.15% 79.34% Traffic Officer 1 1.15% 79.34% Traffic Officer 1 1.15% 80.49% Domestic Worker 5 5.75% 86.24% Caretaker 1 1.15% 87.39% Domestic Worker 5 5.75% 86.24% Caretaker 1 1.15% 87.39% Domestic Worker 5 5.75% 86.24% Caretaker 1 1.15% 87.39% Domestic Worker 5 5.75% 86.24% Caretaker 1 1.15% 87.39% Domestic Worker 5 5.75% 86.24% Caretaker 1 1.15% 87.39% Doctor 1 1.15% 87.39% Doctor 1 1.15% 89.69% Nanny 1 1.15% 90.84% Waiter 1 1.15% 90.84% Waiter 1 1.15% 92% Non-response 7 8.05% 100% | Table 4.5 Frequencies of Mothers' Careers in Test Group | | | | | |
|--|---|----------------|---------------------|----------------------------|--|--|
| Housewife 21 24.14% 25.29% Unemployed 16 18.4% 43.69% Manager 1 1.15% 44.84% Nurse 7 8.05% 52.89% General Labourer 1 1.15% 54.04% Deceased 1 1.15% 55.19% Clerk 2 2.3% 57.49% Factory Worker 3 3.45% 60.94% Supervisor 1 1.15% 62.09% Crèche Teacher and Owner 2 2.3% 64.39% Policewoman 1 1.15% 65.54% Cashier 3 3.45% 68.99% Chef 1 1.15% 70.14% Secretary 2 2.3% 72.44% Cleaner 4 4.6% 77.04% Farm Worker 1 1.15% 79.34% Traffic Officer 1 1.15% 80.49% Domestic Worker 5 5.75% | Theme Assistant | Frequency 1 | Percentage 1.15% | Cumulative Frequency 1.15% | | |
| Manager 1 1.15% 44.84% Nurse 7 8.05% 52.89% General Labourer 1 1.15% 54.04% Deceased 1 1.15% 55.19% Clerk 2 2.3% 57.49% Factory Worker 3 3.45% 60.94% Supervisor 1 1.15% 62.09% Crèche Teacher and Owner 2 2.3% 64.39% Policewoman 1 1.15% 65.54% Cashier 3 3.45% 68.99% Chef 1 1.15% 70.14% Secretary 2 2.3% 72.44% Cleaner 4 4.6% 77.04% Farm Worker 1 1.15% 78.19% Block Woman 1 1.15% 80.49% Domestic Worker 5 5.75% 86.24% Caretaker 1 1.15% 89.69% Nanny 1 1.15% 90.84% Waiter 1 1.15% 90.84% | | · | | | | |
| Nurse 7 8.05% 52.89% General Labourer 1 1.15% 54.04% Deceased 1 1.15% 55.19% Clerk 2 2.3% 57.49% Factory Worker 3 3.45% 60.94% Supervisor 1 1.15% 62.09% Crèche Teacher and Owner 2 2.3% 64.39% Policewoman 1 1.15% 65.54% Cashier 3 3.45% 68.99% Chef 1 1.15% 70.14% Secretary 2 2.3% 72.44% Cleaner 4 4.6% 77.04% Farm Worker 1 1.15% 78.19% Block Woman 1 1.15% 79.34% Traffic Officer 1 1.15% 80.49% Domestic Worker 5 5.75% 86.24% Caretaker 1 1.15% 87.39% Doctor 1 1.15% 87.39% Doctor 1 1.15% 89.69% Nanny 1 1.15% 90.84% Weiter 1 1.15% 90.84% Waiter 1 1.15% 90.84% | Unemployed | 16 | 18.4% | 43.69% | | |
| General Labourer 1 1.15% 54.04% Deceased 1 1.15% 55.19% Clerk 2 2.3% 57.49% Factory Worker 3 3.45% 60.94% Supervisor 1 1.15% 62.09% Crèche Teacher and Owner 2 2.3% 64.39% Policewoman 1 1.15% 65.54% Cashier 3 3.45% 68.99% Chef 1 1.15% 70.14% Secretary 2 2.3% 72.44% Cleaner 4 4.6% 77.04% Farm Worker 1 1.15% 79.34% Traffic Officer 1 1.15% 80.49% Domestic Worker 5 5.75% 86.24% Caretaker 1 1.15% 87.39% Doctor 1 1.15% 89.69% Nanny 1 1.15% 90.84% Waiter 1 1.15% 90.84% | Manager | 1 | 1.15% | 44.84% | | |
| Labourer 1 1.15% 54.04% Deceased 1 1.15% 55.19% Clerk 2 2.3% 57.49% Factory Worker 3 3.45% 60.94% Supervisor 1 1.15% 62.09% Crèche Teacher and Owner 2 2.3% 64.39% Policewoman 1 1.15% 65.54% Cashier 3 3.45% 68.99% Chef 1 1.15% 70.14% Secretary 2 2.3% 72.44% Cleaner 4 4.6% 77.04% Farm Worker 1 1.15% 79.34% Traffic Officer 1 1.15% 80.49% Domestic Worker 5 5.75% 86.24% Caretaker 1 1.15% 87.39% Doctor 1 1.15% 89.69% Nanny 1 1.15% 90.84% Waiter 1 1.15% 90.84% | Nurse | 7 | 8.05% | 52.89% | | |
| Clerk 2 2.3% 57.49% Factory Worker 3 3.45% 60.94% Supervisor 1 1.15% 62.09% Crèche Teacher and Owner 2 2.3% 64.39% Policewoman 1 1.15% 65.54% Cashier 3 3.45% 68.99% Chef 1 1.15% 70.14% Secretary 2 2.3% 72.44% Cleaner 4 4.6% 77.04% Farm Worker 1 1.15% 79.34% Traffic Officer 1 1.15% 80.49% Domestic Worker 5 5.75% 86.24% Caretaker 1 1.15% 87.39% Doctor 1 1.15% 89.69% Nanny 1 1.15% 90.84% Waiter 1 1.15% 92% | | 1 | 1.15% | 54.04% | | |
| Factory Worker 3 3.45% 60.94% Supervisor 1 1.15% 62.09% Crèche Teacher and Owner 2 2.3% 64.39% Policewoman 1 1.15% 65.54% Cashier 3 3.45% 68.99% Chef 1 1.15% 70.14% Secretary 2 2.3% 72.44% Cleaner 4 4.6% 77.04% Farm Worker 1 1.15% 78.19% Block Woman 1 1.15% 79.34% Traffic Officer 1 1.15% 80.49% Domestic Worker 5 5.75% 86.24% Caretaker 1 1.15% 87.39% Doctor 1 1.15% 88.54% Engineer 1 1.15% 90.84% Waiter 1 1.15% 90.84% Waiter 1 1.15% 90.84% | Deceased | 1 | 1.15% | 55.19% | | |
| Worker 3 3.45% 60.94% Supervisor 1 1.15% 62.09% Crèche Teacher and Owner 2 2.3% 64.39% Policewoman 1 1.15% 65.54% Cashier 3 3.45% 68.99% Chef 1 1.15% 70.14% Secretary 2 2.3% 72.44% Cleaner 4 4.6% 77.04% Farm Worker 1 1.15% 79.34% Traffic Officer 1 1.15% 80.49% Domestic Worker 5 5.75% 86.24% Caretaker 1 1.15% 87.39% Doctor 1 1.15% 89.69% Nanny 1 1.15% 90.84% Waiter 1 1.15% 92% | Clerk | 2 | 2.3% | 57.49% | | |
| Crèche Teacher and Owner 2 2.3% 64.39% Policewoman 1 1.15% 65.54% Cashier 3 3.45% 68.99% Chef 1 1.15% 70.14% Secretary 2 2.3% 72.44% Cleaner 4 4.6% 77.04% Farm Worker 1 1.15% 79.34% Traffic Officer 1 1.15% 80.49% Domestic Worker 5 5.75% 86.24% Caretaker 1 1.15% 87.39% Doctor 1 1.15% 88.54% Engineer 1 1.15% 90.84% Waiter 1 1.15% 92% | | 3 | 3.45% | 60.94% | | |
| Teacher and Owner 2 2.3% 64.39% Policewoman 1 1.15% 65.54% Cashier 3 3.45% 68.99% Chef 1 1.15% 70.14% Secretary 2 2.3% 72.44% Cleaner 4 4.6% 77.04% Farm Worker 1 1.15% 79.34% Traffic Officer 1 1.15% 80.49% Domestic Worker 5 5.75% 86.24% Caretaker 1 1.15% 87.39% Doctor 1 1.15% 89.69% Nanny 1 1.15% 90.84% Waiter 1 1.15% 92% | Supervisor | 1 | 1.15% | 62.09% | | |
| Policewoman 1 1.15% 65.54% Cashier 3 3.45% 68.99% Chef 1 1.15% 70.14% Secretary 2 2.3% 72.44% Cleaner 4 4.6% 77.04% Farm Worker 1 1.15% 78.19% Block Woman 1 1.15% 79.34% Traffic Officer 1 1.15% 80.49% Domestic Worker 5 5.75% 86.24% Caretaker 1 1.15% 87.39% Doctor 1 1.15% 89.69% Nanny 1 1.15% 90.84% Waiter 1 1.15% 92% | Teacher and | 2 | 2.3% | 64.39% | | |
| Cashier 3 3.45% 68.99% Chef 1 1.15% 70.14% Secretary 2 2.3% 72.44% Cleaner 4 4.6% 77.04% Farm Worker 1 1.15% 78.19% Block Woman 1 1.15% 79.34% Traffic Officer 1 1.15% 80.49% Domestic Worker 5 5.75% 86.24% Caretaker 1 1.15% 87.39% Doctor 1 1.15% 89.69% Nanny 1 1.15% 90.84% Waiter 1 1.15% 92% | | | | | | |
| Secretary 2 2.3% 72.44% Cleaner 4 4.6% 77.04% Farm Worker 1 1.15% 78.19% Block Woman 1 1.15% 79.34% Traffic Officer 1 1.15% 80.49% Domestic Worker 5 5.75% 86.24% Caretaker 1 1.15% 87.39% Doctor 1 1.15% 88.54% Engineer 1 1.15% 90.84% Waiter 1 1.15% 92% | Cashier | 3 | 3.45% | 68.99% | | |
| Cleaner 4 4.6% 77.04% Farm Worker 1 1.15% 78.19% Block Woman 1 1.15% 79.34% Traffic Officer 1 1.15% 80.49% Domestic Worker 5 5.75% 86.24% Caretaker 1 1.15% 87.39% Doctor 1 1.15% 88.54% Engineer 1 1.15% 89.69% Nanny 1 1.15% 90.84% Waiter 1 1.15% 92% | Chef | 1 | 1.15% | 70.14% | | |
| Farm Worker 1 1.15% 78.19% Block Woman 1 1.15% 79.34% Traffic Officer 1 1.15% 80.49% Domestic Worker 5 5.75% 86.24% Caretaker 1 1.15% 87.39% Doctor 1 1.15% 88.54% Engineer 1 1.15% 89.69% Nanny 1 1.15% 90.84% Waiter 1 1.15% 92% | Secretary | 2 | 2.3% | 72.44% | | |
| Block Woman 1 1.15% 79.34% Traffic Officer 1 1.15% 80.49% Domestic Worker 5 5.75% 86.24% Caretaker 1 1.15% 87.39% Doctor 1 1.15% 88.54% Engineer 1 1.15% 89.69% Nanny 1 1.15% 90.84% Waiter 1 1.15% 92% | Cleaner | 4 | 4.6% | 77.04% | | |
| Traffic Officer 1 1.15% 80.49% Domestic Worker 5 5.75% 86.24% Caretaker 1 1.15% 87.39% Doctor 1 1.15% 88.54% Engineer 1 1.15% 89.69% Nanny 1 1.15% 90.84% Waiter 1 1.15% 92% | Farm Worker | 1 | 1.15% | 78.19% | | |
| Domestic Worker 5 5.75% 86.24% Caretaker 1 1.15% 87.39% Doctor 1 1.15% 88.54% Engineer 1 1.15% 89.69% Nanny 1 1.15% 90.84% Waiter 1 1.15% 92% | Block Woman | 1 | 1.15% | 79.34% | | |
| Worker 5 5.75% 86.24% Caretaker 1 1.15% 87.39% Doctor 1 1.15% 88.54% Engineer 1 1.15% 89.69% Nanny 1 1.15% 90.84% Waiter 1 1.15% 92% | Traffic Officer | 1 | 1.15% | 80.49% | | |
| Doctor 1 1.15% 88.54% Engineer 1 1.15% 89.69% Nanny 1 1.15% 90.84% Waiter 1 1.15% 92% | | 5 | 5.75% | 86.24% | | |
| Engineer 1 1.15% 89.69% Nanny 1 1.15% 90.84% Waiter 1 1.15% 92% | Caretaker | 1 | 1.15% | 87.39% | | |
| Nanny 1 1.15% 90.84% Waiter 1 1.15% 92% | Doctor | 1 | 1.15% | 88.54% | | |
| Waiter 1 1.15% 92% | Engineer | 1 | 1.15% | 89.69% | | |
| | Nanny | 1 | 1.15% | 90.84% | | |
| Non-response 7 8.05% 100% | Waiter | 1 | 1.15% | 92% | | |
| | Non-response | 7 | 8.05% | 100% | | |

If one looks at the occupations of the test group's mothers, 24.14% were Housewives and 18.4% were Unemployed. Again, the overall occupations can be

classified as unskilled, semi-skilled and skilled positions with only a few being professional.

The results of the control group (n = 49) were as follows:

Two of the 49 learners, left out the question regarding their father's occupation and one learner left out the occupation of her mother, as depicted in Table 4.6 and Table 4.7

Table 4.6 Frequencies of Fathers' Careers in Control Group

| Theme | Frequency | Percentage | Cumulative Frequency |
|------------------------|-----------|------------|----------------------|
| Policeman | 2 | 4.08% | 4.08% |
| Engineer | 3 | 6.12% | 10.2% |
| Unemployed | 11 | 22.45% | 32.65% |
| Baker | 1 | 2.04% | 34.69% |
| Factory Worker | 2 | 4.08% | 38.77% |
| General Labourer | 3 | 6.12% | 44.89% |
| Deceased | 2 | 4.08% | 48.97% |
| Builder | 3 | 6.12% | 55.09% |
| Security Manager | 1 | 2.04% | 57.13% |
| Supervisor | 2 | 4.08% | 61.21% |
| Boilermaker | 2 | 4.08% | 65.29% |
| Butchery Worker | 1 | 2.04% | 67.33% |
| Cashier | 1 | 2.04% | 69.37% |
| Deliverer | 1 | 2.04% | 71.41% |
| Spray Painter | 1 | 2.04% | 73.45% |
| Counsellor | 1 | 2.04% | 75.49% |
| Taxi Driver | 2 | 4.08% | 79.57% |
| Truck Driver | 2 | 4.08% | 83.65% |
| Mason | 1 | 2.04% | 85.69% |
| Soldier | 1 | 2.04% | 87.73% |
| Painter | 1 | 2.04% | 89.77% |
| Entrepreneur | 1 | 2.04% | 91.81% |
| Construction Worker | 1 | 2.04% | 93.85% |

| Pastor | 1 | 2.04% | 95.89% |
|--------------|---|-------|--------|
| Non-response | 2 | 4.08% | 100% |

In the control group, 22.45% of the fathers were Unemployed and 6.12% of them worked as a General labourer, while 6.12% worked as an Engineer. Again, most of the occupations can be classified as unskilled, semi-skilled and skilled positions. However, more occupations that in the test group can be classified as professional careers.

Table 4.7 Frequencies of Mothers' Careers in Control Group

| Theme | Frequency | Percentage | Cumulative Frequency |
|------------------------|-----------|------------|----------------------|
| Social Worker | 1 | 2.04% | 2.04% |
| Housewife | 10 | 20.41% | 22.45% |
| Unemployed | 9 | 18.37% | 40.82% |
| Chef | 1 | 2.04% | 42.86% |
| Factory Worker | 4 | 8.16% | 51.02% |
| General Labourer | 1 | 2.04% | 53.06% |
| Deceased | 1 | 2.04% | 55.1% |
| Baker | 1 | 2.04% | 57.14% |
| NGO Worker | 1 | 2.04% | 59.18% |
| Domestic Worker | 3 | 6.12% | 65.3% |
| Teacher | 4 | 8.16% | 73.46% |
| Caterer | 1 | 2.04% | 75.5% |
| Cashier | 1 | 2.04% | 77.54% |
| Bar Lady | 1 | 2.04% | 79.58% |
| Departmental Worker | 1 | 2.04% | 81.62% |
| Receptionist | 1 | 2.04% | 83.66% |
| Cleaner | 3 | 6.12% | 89.78% |
| Nurse | 2 | 4.08% | 93.86% |
| Nursing Home Worker | 1 | 2.04% | 95.9% |
| Shop Assistant | 1 | 2.04% | 97.94% |

| Non-response | 1 | 2.04% | 100% |
|--------------|---|---------|--------|
| Non-response | 1 | 2.04 /6 | 100 /6 |

In the control group, 20.41% of the learners' mothers were Housewives, whereas 18.37% were Unemployed. The third largest groups were Teachers (8.16%) and Factory Workers (8.16%), followed by Domestic Workers (6.12%) and Cleaners (6.12%). The mothers' occupations are classified as unskilled, semi-skilled and skilled occupations with a Chef and Teacher being professional.

The largest proportion of the parents' careers can be classified as occupations that fall within the National Qualification Framework (NQF) levels 1 to 4 education standards, with a few exceptions. What this means is that most of the parents follow occupations that required a minimum education of anything between Grade 4 and Grade 12.

According to Sewel, Haller and Portes (1969) the status of one's family background has a significant impact on one's educational aspirations, career aspirations and eventually the occupation one follows. This background includes the education level of the parents, the occupation of the father and the socio-economic level of the family. Learners need the support of their parents and significant others in order to explore different career options. Fredrickson (1982) stated that children are inclined to follow the same level of career as their parents. Wahl and Blackhurst (2000) had found that children whose parents are both unemployed, will have lower career aspirations than learners who have at least one parent who is working. Parents are the most influential role models for their children and their occupations can form a part of their example (Morrow, 1995). It is therefore important to take the occupations of the learners' parents into consideration when it comes to their knowledge of careers and their aspirations.

4.4 Summary

The purpose of this chapter was to discuss the results obtained from the measurement instruments that were used. It was found that the intervention had a significant impact on the learners' self-knowledge, as well as on their readiness to make a career choice and their knowledge about careers, in other words, their

career maturity, and was therefore successful. This form of career counselling, namely a group-based, less comprehensive session and relatively low-cost intervention will therefore be a suitable option for utilisation in schools where learners would not otherwise be able to afford career counselling.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

Selecting the right occupation marks a very important decision in an individual's life. This decision does not result in certain implications for the individual only, but also has consequences for the organisation in which the individual eventually works (Edwards, 2004). An individual who is unhappy in his/her occupation, will be more likely to experience stress and unhappiness which will eventually lead to decreased work performance. On the other hand, an individual who has made the right choice of career will be more satisfied and will have a positive impact on the bottom line of the organisation (Edwards, 1991; Kristof, 1996; Tinsley, 2000).

It is therefore very important for individuals to have adequate knowledge in order to make the right career decisions. Knowledge about oneself in terms of personality, aptitude and interests forms a very important part of this. If an individual has sufficient self-knowledge, it is easier to decide on an occupation that fits with his/her personality, aptitude and interests. In order for an individual to make a good occupational decision, his/her needs, values, interests and capabilities must be in alignment with the demands and rewards of the occupation. Self-knowledge and knowledge about possible occupations is thus of great importance (Kidd, 1984).

The importance of career counselling has been stressed in various studies as well as in this study. The focus of career counselling is on helping individuals to become more knowledgeable about their aptitudes, personality, interests and values with regard to work. In other words, career counselling assists individuals on gaining better self-knowledge (Naicker, 1994). The focus of this study therefore was to develop a career counselling intervention suitable for Grade 11 learners that would increase their self-knowledge and influence their thoughts about their future and possible careers.

Given the importance of having sufficient self-knowledge and making a wise occupational choice, career counselling is recommend for schoolchildren in order to help them with career choices (Naicker, 1994). Career counselling usually takes

place in Grade 9, 11 and 12. In Grade 9, the focus is specifically on helping learners to make the right subject choices; career counselling in Grades 11 and 12, is specifically career related. This intervention is aimed at increasing the self-knowledge of the learners in terms of personality, interests and aptitude.

5.2 Discussion

The career counselling intervention that was specifically developed for Grade 11 learners focused on personality, aptitude and interests. It was argued that, since the intervention would have been group-based, the focus would rather be on self-knowledge than on helping the learners know exactly what occupation to follow as time constraints and resources were limited.

Two sessions were scheduled for the intervention. Subtests of the DAT (K) were used, and the MB10 and 16PF Questionnaires were administered in the first session. The second session began with the measurement instrument given to the learners to measure their current level of self-knowledge as well as their thoughts about making a career choice. A feedback session was then held with the help of a workbook for the learners, after which the measurement instrument was again given to the learners to measure their self-knowledge and intention to pursue further studies after the feedback and intervention.

5.3 Results

The results of the study will be discussed with specific reference to self-knowledge and career maturity.

5.3.1 Self-knowledge

Pavlak and Kammer (1985) have stated that vocational development is very much about the development and implementation of a self-concept. The self-concept can be seen as closely related to self-knowledge, since self-concept refers to the way that individuals think of themselves, which automatically includes what they think their personality, aptitude and interests are (Cooper & Thatcher, 2010). Pavlak and Kammer, in their study, conducted a short-term career guidance intervention on delinquent youth. Their aim was to determine whether the intervention had an impact

on the career maturity levels of the subjects as well as whether the intervention played a role in the subjects' levels of self-concept. Their results in terms of self-concept are of relevance for this study.

Portnoi, Guichard and Lallemand (2004) similarly conducted a study to determine whether a career intervention resulted in an increase in self-knowledge. The result of their study is of particular importance since it also focused on increasing self-knowledge. A questionnaire based on the Big Five personality factors were used in their study. The results suggested a significant increase in self-knowledge after participation in the intervention; however it should be mentioned that it was only just significant and it could easily have missed the significance level (Portnoi *et al.*). Since only one measure of self-knowledge (a questionnaire based on the Big Five personality factors) was used, it might be useful to use different models as well to measure self-knowledge in order to gain more realistic results. However, if the different measurement instruments measure the same constructs, it would be repetitive and thus not necessary

5.3.2 Career maturity

The initial intention was not to measure career maturity, but as the term was further pondered upon, it only made sense that career maturity should also be measured when career counselling is conducted. As mentioned, the original Career Development Questionnaire, of which some questions were used, is intended to measure career maturity and it therefore made sense that this construct surfaced.

Career maturity can be defined as an individual's ability to make career choices that are appropriate; the ability to know what is required to make a career choice; and the extent to which the career choices you make are both realistic and consistent over time (Crites, 1978; King, 1989; Ohler, Levinson & Hays, 1996). Another definition explains that career maturity is the degree to which an individual has learned the required knowledge and skills to make career choices that are intelligent and realistic. It also refers to the readiness to make an informed choice that is age appropriate, as well as the ability to cope with the relevant career development tasks (Luzzo, 1993; Savickas, 1984).

There are different overlapping views as to what career maturity consists of. Crites (1965, 1971) developed a career maturity model according to which career maturity consists of two dimensions: an affective and a cognitive dimension. The cognitive dimension consists of career decision-making skills and the affective dimension refers more to the individual's attitude towards career development.

Creed and Patton (2003) have found in their study that self-efficacy, age, career certainty and work commitment were the main predictors of career maturity attitudes (affective dimension). Age, gender, career certainty, work commitment and career indecision were the main predictors of career maturity knowledge (cognitive dimension). In Yon, Joeng and Goh's (2012) study, the researchers determined that their test candidates' career maturity had been influenced significantly by personal predictors, such as work values, gender, self-efficacy, career efficacy, school achievement, career development activities, academic pressure, gender-role stereotyping and part-time experiences as well as contextual predictors which included career conversations with their parents, private education expense and relationships with their friends.

When the current intervention is looked at in the light of focusing on career maturity, one can say that the intervention did place a focus on career maturity, but maybe not as much as on self-knowledge. Learners were equipped with self-knowledge, which forms part of the knowledge that is required for making a career choice. Time was also spent at the end of the feedback session to discuss the sources where learners could obtain information regarding tertiary options and entry requirements, which also equipped the learners with some necessary information for making an informed choice. The cognitive part of career maturity was thus touched on. The affective part of career maturity is more dependent on the individual him/herself, but the learners were motivated to start thinking about a career choice and taking active decisions in acquiring knowledge for career development and eventually making a career choice.

5.4. Evaluation of the intervention

From a logistical point of view, it was quite difficult to find dates which suited both schools as the school year is already very full. A positive aspect was the fact that both schools were very eager to receive career counselling for their learners.

The first session took place without any problems. Initially, there was some confusion regarding the groups into which the learners were allocated since they wanted to remain with their friends and moved between groups, but besides that, the completion of the pre-test as well as the psychometric testing went well. It was realised soon that it was necessary to build a trust relationship with the learners, but also, at the same time, to build a firm foundation of discipline. Since the group of facilitators all had different personalities, this trusting yet disciplined environment could be created quickly and was well received by the learners.

The second session at school A was a very fulfilling session in the sense that the learners participated actively in the feedback discussions. There was one learner who told one of the facilitators that his profile description was an exact profile of himself and he was very impressed by this. The feedback session at school B was a bit more challenging as it was difficult to involve the learners in the discussions. They were less responsive and it sometimes felt as if they did not fully understand the feedback. Extra effort was made and more individual discussions took place, but it seemed to have been less fulfilling at the end of the session and less successful than at the previous school. This, however, might be a subjective opinion and not necessarily the true state of affairs as the learners did state that they experienced the session as of value to them.

In terms of the group-based setting, no real problems were experienced, but it was definitely more challenging than individual career counselling. The challenge surfaced with the feedback session, which was the aspect that individualises and differentiates this career counselling from other career counselling interventions and probably also acts as a competitive advantage over other formats. It is easy to overlook learners who do not understand their profiles, even though an effort was made by repeatedly inviting the learners to ask questions and walking among them to be available if they were too shy to raise their hands. Furthermore, retaining their attention was also difficult to some extent, but this was managed well in the end due to the help of the facilitators.

The most important aspect that was found to be a challenge was that all the reports were written by the author alone. This proved to be a challenge due to time constraints which, in effect, resulted in profile feedback reports which were thorough,

but could have been more in depth if done otherwise. If more time had been available or if it had been possible for people to assist with the reports, a more comprehensive feedback report could have been presented to the learners., In order to provide consistency and a standardised report, however, it was necessary for only one person to do the writing. While this can possibly be seen as a limitation to the study, the nature of the study was to do research and there was not really another option to follow. it was also important for the author to minimise variance and to develop a picture of the range of reports. As mentioned earlier, one of the testing factors of this intervention was also to determine whether or not this less comprehensive form of career counselling yields positive results. This includes the more limited feedback and it was regarded as acceptable in this case to provide feedback in this format as it did lead to an increase in self-knowledge as well as career maturity.

The fact that the intervention was not as comprehensive as a career counselling session would normally be, made it possible to provide group-based career counselling in a cost-effective manner. Since this method has proved itself to be successful in increasing self-knowledge and career maturity, this form of career counselling can be provided to schools as a solution when learners would not otherwise be able to afford individual or any career counselling for that matter.

5.5 Limitations and recommendations

A few aspects in the current study can be seen as possible limitations. In future studies, these aspects could be corrected or handled in a different manner.

The use of self-report measures is a limitation of the study because self-reporting is not always that accurate. When self-report measurements are used, it should be kept in mind that individuals do not necessarily have an accurate perception of themselves and might not always understand the instrument correctly. According to McHugh, Rasmussen and Otto (2011), the validity of the results is largely dependent on the degree to which the respondents can understand the instrument. Donaldson and Grant-Vallone (2002) also state that response bias can occur in self-report measures and should therefore be taken into consideration. An example of this occurs when individuals rate themselves more favourably in order to score more

socially desirable results (Mick, 1996). This has an effect on the validity of the results. Another problem that can occur concerns the inferences made by the researcher. This is a problem because inferences could be influenced by common method variance and consequently be inflated (Donaldson & Grant-Vallone).

In terms of the sample, the fact that a convenience sample was used can be seen as a limitation. The ideal would be to choose a sample randomly and also to make use of a larger sample.

At the time the study only focused on a limited number of constructs, namely personality, aptitude and interests, which were then linked with self-knowledge. However, there are more constructs, such as values, that could also enhance self-knowledge. It might be valuable for future studies to also focus on other constructs which could play a role in career counselling and self-knowledge.

The concept of motivation can also play an important role in the decision to make a career choice and this also ties in with career maturity. If a learner is not motivated to make a career choice, or if the right motivators are not present, career counselling would not necessarily lead to a career choice. It has be stated, however, that thorough career education and guidance will assist learners to be more intrinsically motivated since it will help them to develop a career identity (Geurts & Meijers, 2009). Motivation can be studied in greater depth in further studies as there are more factors that play a role in the level of motivation in a person.

The same applies to situational variables which could have an effect on a learner's readiness to make a career choice. According to Sampson, Dozier and Colvin (2011), a career counselling intervention may be successful for one learner, but unsuccessful for another, depending on the level of readiness to make a career choice. Sampson *et al.* define readiness for career decision as an individual's form of preparation for receiving career counselling and the learning experience that is necessary for exploring the different career options and deciding which option to follow. This is closely related to career maturity, but the focus is more on the readiness to receive career counselling rather than acting on career counselling as career maturity refers to. Sampson, McClain, Musch and Reardon (2013) identified personal circumstances, which can include social circumstances, as one of the

factors which could lead to low readiness for the effective use of career counselling interventions. The other factors mentioned are self-knowledge, personal characteristics, options, decision making and prior experience with career counselling interventions. These aspects were addressed in the development of the intervention; however, more attention could have been given to situational variables such as the socio-economic circumstances of the learners which were briefly discussed. The efficacy of a career counselling intervention is likely to increase if the intervention is developed to be compatible with the learners' readiness for decision-making (Whiston & Tai, 2006).

5.6 Conclusion

Choosing the right career remains an extremely important decision, especially given the dynamic changes in the environment that affect the workplace both directly and indirectly. One of the more important prerequisites for making a sound decision is a certain threshold level of self-knowledge. Self-knowledge implies awareness and understanding of one's personality, interests and aptitude, and is necessary in order to make a reasonably accurate career choice. Person-job fit is of great importance for the individual to achieve personal fulfilment in his/her career and thus to add value for the organisation, further accentuating the importance of self-knowledge.

It is not enough to only have self-knowledge, though. A certain level of career maturity is required to not only have adequate self-knowledge, but to take action and make a career choice.

It was found that this group-based, relatively low-cost career counselling intervention that focused on personality, aptitude and interests, as indicated in the objectives of the study, did indeed lead to an increase in the level of self-knowledge of the learners as well as an increase in their level of career maturity. It is hoped that this knowledge and these skills will assist the learners in making an informed career choice.

As referred to earlier, organisations have to take Employment Equity legislation and Broad Based Black Economic Empowerment into account when they employ new employees but often there is not necessarily a strong pool of applicants available. If previously disadvantaged learners could have the opportunity to receive career

counselling, they would be able to make a more informed career choice and then possibly form part of a stronger pool of applicants to choose from.

Even though willpower/agency was not explicitly tested, it is closely tied with career maturity and since an increase in career maturity occurred, one can assume that an increase occurred in willpower/agency as well. This is however open for debate.

This specific career counselling intervention format was found to be suitable for use as a viable solution to utilise in schools where learners would not otherwise be able to afford a full-scale, individualised career counselling intervention through empirically evaluating the impact of the intervention. It is trusted that this study can add to the literature regarding career counselling in South Africa.

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APPENDIX A LETTERS OF PERMISSION



UNIVERSITEIT VAN STELLENBOSCH OUERLIKE TOESTEMMING OM AAN NAVORSING DEEL TO NEEM.

EVALUERING VAN BEROEPSVOORLIGTING OP SKOOLKINDERS

U toestemming word gevra om u kind toe te laat om aan 'n navorsingstudie onderneem deur myself, Annette du Toit van die Departement Bedryfsielkunde van die Universiteit van Stellenbosch, te laat deelneem. Die resultate van hierdie studie sal bydra tot my meestersstudie. U kind is gekies as 'n deelnemer aan hierdie studie omdat hy/sy tans in gr. 11 is en ek, tesame met 'n gekwalifiseerde span, beroepsvoorligting op die gr. 11's gaan toepas.

1. DOEL VAN DIE STUDIE

Die doel van die studie is om te bepaal of beroepsvoorligting 'n invloed op gr. 11 leerders het. Ek wil bepaal of die voorligting hulle help om hulself beter te leer ken en dus hul selfkennis verhoog. Die tema van my navorsingstudie is "Die evaluering van 'n moontlike toename in selfkennis deur middel van 'n beroepsvoorligtingsintervensie vir Gr. 11-leerders."

2. PROSEDURES

As u kind bereid sou wees om aan hierdie studie deel te neem, sal ek/ons, hom/haar vra om twee kort vraelyste in te vul, wat ongeveer 25 minute elk sal neem om te voltooi. Voltooing van die vraelys sal nie met u kind se normale skoolprogram inmeng nie aangesien dit sal plaasvind op die dae wat ons die beroepsvoorligting sal doen. U kind sal gevra word om sy/haar naam te verskaf. Dit word benodig om die resultate van die vraelys een met die resultate van vraelys twee te vergelyk. Vraelys een sal beantwoord word voor die beroepsvoorligting en vraelys twee na die beroepsvoorligting. Ek gaan slegs die vraelyste as inligting vir my navorsing gebruik. Die hele proses gaan oorsien word deur 'n Bedryfsielkundige wat by die Beroepsraad vir Sielkundiges geregistreer is.

3. POTENSIËLE RISIKO'S EN ONGEMAK

Daar is geen voorsienbare risiko's verbonde aan deelname aan hierdie navorsing nie. Die resultate van die studie sal vertroulik hanteer word. Net ek en my studieleier, Mev. Michelle Visser sal toegang tot die data hê. Onderwysers by die skool sal nie toegang tot die opname van die individu kry nie.

4. POTENSIËLE VOORDELE VIR STUDENTE EN/OF DIE GEMEENSKAP

Deelname aan die intervensie het ten doel om u kind te sensitiseer rakende die wêreld van werk en beroepe. Bykomend hierby, sal u kind ook meer leer oor sy/haar persoonlikheid, belangstellings en aanleg.

5. BETALING VIR DEELNAME

U kind sal geen betaling ontvang vir sy/haar deelname nie.

6. VERTROULIKHEID

Enige inligting wat deur middel van die navorsing verkry word en wat met u kind in verband gebring kan word, sal vertroulik bly en slegs met u en u kind se toestemming bekend gemaak word of soos deur die wet vereis. Vertroulikheid sal gehandhaaf word deur toegang tot die data tot myself en my studieleier te beperk. 'n Opsomming van die navorsingsbevindinge sal aan onderwysers van die skool verskaf word. In geen van hierdie gevalle sal die identiteit van enige navorsingsdeelnemer bekend gemaak word nie.



7. DEELNAME EN ONTTREKKING

U kan besluit of u kind aan die studie mag deelneem. As u kind deelneem kan hy/sy te enige tyd onttrek sonder gevolge van enige aard.

8. IDENTIFISERING VAN ONDERSOEKERS

Indien u enige vrae of besorgdheid omtrent die navorsing het, staan dit u vry om in verbinding te tree met Annette du Toit (084 627 0073/084 823 4069; 15735001@sun.ac.za) en/of Mevrou Michelle Visser (021 808 2961, mvis@sun.ac.za) albei van die Departement Bedryfsielkunde van die Universiteit van Stellenbosch.

9. REGTE VAN NAVORSINGSDEELNEMERS

U kan enige tyd u toestemming terugtrek en u kind se deelname beëindig, sonder enige nadelige gevolge. Deur in te stem dat u kind aan die navorsing deelneem doen u geensins afstand van enige wetlike regte, eise of regsmiddel nie. Indien u vrae het oor u kind se regte as proefpersoon by navorsing, kan u met Me Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] van die Afdeling Navorsingsontwikkeling, US skakel.

HANDTEKENING VAN OUER OF VOOG



STELLENBOSCH UNIVERSITY PARENTAL CONSENT TO TAKE PART IN RESEARCH

EVALUATION OF A CAREER COUNSELLING INTERVENTION ON GRADE 11 LEARNERS

Your permission is requested for your child to take part in a research project undertaken by me, Annette du Toit, from the Department of Industrial Psychology at Stellenbosch University. The results of the study will contribute towards my Master's degree. Your child was selected to participate in this study as he/she is in Grade 11 at present and I, together with a qualified team, will be presenting career counselling to Grade 11 learners.

1. PURPOSE OF THE STUDY

The purpose of the study is to determine whether career counselling has any influence as far as Grade 11 learners are concerned. I wish to determine whether such guidance helps them to get to know themselves better and thereby gain enhanced self-knowledge. The theme of my research study is "The evaluation of a possible increase in self-knowledge by means of career counselling intervention for Grade 11 learners."

2. PROCEDURE

Should your child be willing to take part in this study, I/we will ask her/him to complete two brief questionnaires, each of which will take approximately 25 minutes to complete. Completion of the questionnaires will not interfere with your child's normal school programme, as it will be done on the days when career counselling is offered. Your child will be asked to provide his/her name. This will be necessary to enable comparison between the results obtained from Questionnaire one and those from Questionnaire two. Questionnaire one will be completed before the career counselling session and Questionnaire two will be completed afterwards. The questionnaires will only be used as information for my research. The whole process will be overseen by an Industrial Psychologist registered at the Health Professions Council of South Africa.

3. POTENTIAL RISKS AND DISCOMFORT

No potential risks are envisaged with regard to participation in this research. The results of the study will be dealt with in a confidential manner. Only my study leader, Mrs Michelle Visser, and I will have access to the data. Teachers at the school will not gain access to the results of any individual.

4. POTENTIAL ADVANTAGE FOR STUDENTS AND/OR THE COMMUNITY

Participation in the intervention has the purpose of sensitising your child regarding the world of work and careers. In addition, your child will gain more knowledge about her/his personality, interests and aptitudes.

5. REMUNERATION FOR PARTICIPATION

Your child will not be remunerated for his/her participation.

6. CONFIDENTIALITY

Any information obtained by means of the research that may be linked to your child will remain confidential and will only be made known with your and your child's permission, or as required by law. Confidentiality will be maintained by limiting access to the data to my study leader and myself. A summary of the findings of the research will be provided to the teachers at the school, but the identity of any research participant will not be made known under any of these circumstances.



7. PARTICIPATION AND WITHDRAWAL

You may decide whether your child may take part in this study. If your child participates, she/he may withdraw at any time without fear of consequences of any nature.

8. IDENTIFICATION OF RESEARCHERS

Should you have any queries or concerns regarding the research, please feel free to contact Annette du Toit (084 627 0073/084 823 4069, 15735001@sun.ac.za) and/or Mrs Michelle Visser (021 808 2961, mvis@sun.ac.za), both from the Department of Industrial Psychology, Stellenbosch University.

9. RIGHTS OF RESEARCH PARTICIPANTS

You may withdraw your consent at any time and conclude your child's participation without disadvantageous results. By consenting to allow your child to participate in the research, you do not waive any legal claims, rights or remedies. Should you have queries concerning your child's rights as a subject in research, you are referred to Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] of the Division for Research Development, Stellenbosch University.

Signature of parent/guardian Date

APPENDIX B LETTERS OF ASSENT

DEELNEMER INLIGTING EN INSTEMMINGSVORM



Titel van navorsingsprojek: Die evaluering van 'n moontlike toename in selfkennis deur middel van 'n beroepsvoorligtingsintervensie vir Gr. 11-leerders

1. Waaroor gaan hierdie navorsing?

Die doel van die navorsing is om te kyk of beroepsvoorligting (ons gaan dit met julle in die klas doen), jou help om jouself beter te leer ken. Die beroepsvoorligting gaan fokus op persoonlikheid, belangstelling en aanleg.

2. Hoekom is ek gekies om aan hierdie studie deel te neem?

Jy is gekies om deel te neem, aangesien jy nou in Graad 11 is en die navorsing op Graad 11-leerders gemik is.

3. Wie doen die navorsing?

Ek, Annette du Toit, is 'n student van die Departement Bedryfsielkunde aan die Universiteit van Stellenbosch en het jou hulp nodig met my navorsingstaak.

4. Wat sal gedurende hierdie studie met my gebeur?

As jy kies om aan hierdie studie deel te neem sal jy gevra word om twee kort vraelyste in te vul wat elk omtrent 25 minute neem om voltooi te word.

5. Kan daar enige iets sleg met my gebeur as ek deelneem?

Daar is niks sleg wat met jou kan gebeur as jy besluit om deel te neem of nie deel te neem nie. Die inligting wat ek van jou kry, sal ek vir niemand wys nie, behalwe vir die dosent wat my help met my navorsingstaak.

6. Wat kry ek as ek deelneem?

Jy gaan nie direk iets uit my navorsing kry nie, maar deur middel van die beroepsvoorligting, gaan jy bietjie meer oor jouself leer en ons sal jou ook help om te dink aan 'n moontlike beroep wat jy eendag kan volg.



7. Met wie kan ek oor die studie praat?

Indien jy enige vrae of probleme oor die navorsing het, bel gerus vir Annette du Toit: 084 627 0073 (15735001@sun.ac.za) en/of Mev. M. Visser: 021 808 2961 (mvis@sun.ac.za). Hulle is albei van die Departement Bedryfsielkunde aan die Universiteit Stellenbosch.

8. Wat sal gebeur as ek dit nie wil doen nie?

Jy kan weier om aan die studie deel te neem selfs al het jou ouers tot jou deelname ingestem. Jy kan jou toestemming enige tyd terugtrek sonder om in die moeilikheid te beland. Jy gaan niks wetlike regte of voorregte verloor deur aan hierdie navorsingstudie deel te neem nie. Jy is welkom om nie aan die studie selfdeel te neem nie en steeds die beroepsvoorligting te ontvang.

| | • | | |
|--|-----------------|-------------------|-----------------------|
| 9. Verstaan jy waaroor hier neem? Merk met 'n kruisie | | en is jy bereid | om daaraan deel te |
| Ja | | Nee | |
| 11. Verstaan jy dat jy enige | tyd van die stu | ıdie kan onttrek' | ? Merk met 'n kruisie |
| Ja | | Nee | |
| Naam | | | Van |
| Graad | _ | _ | |
| Leerling se handtekening | | | Datum |
| | Baie | dankie. | |



INFORMATION AND ASSENT FORM FOR PARTICIPANTS



Title of research project: Evaluation of a possible increase in self-knowledge by means of a career counselling intervention for Gr. 11 learners

1. What is the nature of this research?

The purpose of the research is to find out whether career counselling (we will do this with you during class) will help you to get to know yourself better. The career counselling will therefore be focused on personality, interests and aptitude.

2. Why have I been chosen to take part in the study?

You were chosen to take part because you are in Grade 11 and the research is aimed at Grade 11 learners.

3. Who is doing the research?

I, Annette du Toit, am a student in the Department of Industrial Psychology at Stellenbosch University and need your help with my research project.

4. What may happen to me during the study?

If you decide to participate in the study, you will be asked to fill in two brief questionnaires, each of which will take about 25 minutes to complete.

5. Could anything unpleasant happen to me if I participate?

Nothing unpleasant will happen to you whether you decide to participate or not to participate. The information that I will obtain from you will not be shown to anyone except the lecturer who is helping me with the research project.

6. What do I gain from participating??

You will not receive any direct gain from my research, but the career counselling will enable you to learn more about yourself, and will also help you to think about a possible career you might want to follow one day.

7. Is there someone whom I could talk to about the study?

If you have any questions or problems concerning the study, you may phone Annette du Toit: 084 627 0073/084 823 4069 (15735001@sun.ac.za) and/or Mrs M. Visser: 021 808 2961 (mvis@sun.ac.za). Both are of the Department of Industrial Psychology at Stellenbosch University.



8. What will happen if I do not want to take part?

You may refuse to participate in the study, even if your parents have given consent for your participation. You may also withdraw your consent at any time during the research without getting into trouble of any kind. You will not lose any legal rights or privileges by taking part in this research study. You can also decide to receive the career counselling without taking part in the study itself.

| part in the study itself. | | | Ç Ç |
|--|----------|-----------------------|-----------------------|
| 9. Do you understand what the in it? Use a cross (X) to mark | | g to do and are you p | orepared to take part |
| Yes | No | | |
| 11. Do you understand that your cross (X) to mark your answe | - | r from the study at a | ny time? Use a |
| Yes | No | | |
| Name | | Surname | |
| Grade | • | | |
| Learner's signature | | Date | |
| | Thank yo | | |

S