# THE IMPACT OF A CAREER DEVELOPMENT PROGRAMME ON THE CAREER SELF-EFFICACY AND ACADEMIC MOTIVATION OF GRADE 11 LEARNERS FROM DIVERSE SOCIO-ECONOMIC BACKGROUNDS

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## DECLARATION

By submitting this dissertation electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the owner of the copyright thereof and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

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# ABSTRACT

This study was borne out of an attempt to alleviate and heighten awareness of the problems experienced by South African youth in making effective, informed career decisions.  A career development programme, with a sound empirical basis, was considered as an alternative to the traditional career interview approach in assisting large numbers of young people with career development. The goal of this study was to determine the effect of a career intervention programme on the career decision-making self-efficacy (CDMSE) and academic motivation of Grade 11 learners at three schools with diverse socio-economic backgrounds in the East London district.  In addition, the correlative relationship between CDMSE and academic motivation was investigated.

Using a quasi-experimental design, measurements were taken at a pre-test, post-test and a follow-up occasion eight weeks after the completion of the programme. The sample comprised of 222 learners who formed an intervention group and a control group.  The intervention group attended the career development programme which was conducted once a week over a period of six weeks.  The control group was not exposed to the intervention.

The study demonstrated that the CDMSE of the intervention group improved significantly subsequent to the career intervention programme underscoring the value of the career intervention programme.   While the present study's findings lend further support to the notion of CDMSE being a malleable construct that can be enhanced during a six-week intervention, the additional needs of learners from low SES backgrounds were highlighted.

Although the current study demonstrated varying results, it seems that the time period of the programme was not long enough to bring about the process of enhancing motivation.  The relationship found between CDMSE and academic motivation validates interventions using these two constructs and the need for further research to establish the moderating variable in this relationship.

This study has verified that a career development programme, designed for the South African context, can serve as an essential tool to help high school learners from

different socio-economic backgrounds enhance their career maturity expressed in terms of their career decision-making self-efficacy and their academic motivation.

# **OPSOMMING**

Hierdie studie is 'n poging om bewustheid te kweek vir die probleme wat Suid-Afrikaanse jeug beleef om effektiewe en ingeligte beroepskeuses te maak. 'n Beroepsontwikkelingsprogram, met 'n grondige empiriese basis, is oorweeg as 'n alternatief vir die tradisionele beroepsonderhoud-uitgangspunt om jongmense te help met beroepsontwikkeling. Die doel van hierdie studie was om te bepaal wat die uitwerking is van 'n beroepsingrypingsprogram op die doeltreffendheid van die maak van beroepskeuses (CDMSE) en akademiese motivering van Graad 11-leerders by drie verskillende skole met diverse sosio-ekonomiese agtergronde in die Oos-Londen distrik. Bo en behalwe dit, is die verband tussen CDMSE en akademiese motivering ook ondersoek. Deur die gebruik van 'n kwasi-eksperimentele ontwerp, is metings geneem tydens 'n voor-toets, na-toets en 'n opvolgsessie agt weke na voltooing van die program. Die steekproef het bestaan uit 222 leerders wat beide die ingrypingsgroep en kontrole-groep ingesluit het. Die ingrypingsgroep het 'n beroepsontwikkelingsprogram een keer per week oor 'n periode van ses weke bygewoon. Die kontrole-groep is nie aan die ingryping blootgestel nie.

Die studie het getoon dat die CDMSE van die ingrypingsgroep beduidend verbeter het nadat hulle die ingrypingsprogram gevolg het, wat die waarde van die ingrypingsprogram beklemtoon. Behalwe dat die huidige studie se resultate ondersteuning bied aan die idee dat CDMSE ontwikkelbaar is en gedurende 'n ses-week-periode se ingryping versterk kan word, is die addisionele behoeftes van leerders van lae SES-agtergronde ook uitgelig.

Alhoewel die huidige studie wisselende resultate toon, blyk dit dat die tysduur van die program nie lank genoeg was om die proses van verhoogde motivering  tot stand te bring nie. Die verband tussen CDMSE en akademiese motivering bevestig ingrypings waarin hierdie twee konstrukte geteiken word, sowel as die behoefte aan verdere studie om die modererende veranderlike in hierdie verhouding vas te stel.

Hierdie studie het bevestig dat 'n beroepsontwikkelingsprogram, ontwerp vir die Suid-Afrikaanse konteks, as 'n noodsaaklike instrument gebruik kan word om hoërskoolleerders van verskillende sosio-ekonomiese agtergronde te help om hulle

beroepsvolwassenheid te verhoog in terme van effektiewe beroepskeuses en akademiese motivering.

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My Lord, for guiding the entire process.

## <u>DEDICATION</u>

This dissertation is dedicated to the loving memory of my mother, Iris Mary Stockland, who passed away on the 16 September 2014.   She taught me the meaning of love and service.

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## *CHAPTER 1*

## CONTEXT AND BACKGROUND

*"Be the architect of your life, not the victim of your career!"*

Albert Einstein

### 1.1 Introduction

It is well recognised that a successful and satisfying career path forms one of the cornerstones of a fulfilling personal life and is a fundamental component of a successful society. Teenagers are presented with the challenge of making a decision which will launch them into the first phase of their careers. This career choice remains one of the most difficult decisions adolescents have to make in their lifetime (Bernard-Phera, 2000), irrespective of their socio-economic background.

Numerous variables underlie the complexity of this decision. First, adolescence is a stage of development which is underpinned with confusion and uncertainty as the individual transitions through concomitant physical, social-emotional, cognitive and educational change.  Second, the adolescent age group forms a significant percentage of the South African population.  The 2012 South African census revealed that 21% of the population is in the 15 to 24 years age group, of which 48% are unemployed (Index Mundi, 2013).  Third, there is an oversubscription to South African universities which has resulted in extensive competition to gain acceptance into a university (Higher Education South Africa, 2014).  Fourth, first year students are struggling to meet the required outcomes of their higher education courses and a significant number of these students either drop-out or fail by the end of their first year (Higher Education South Africa, 2014).  Lastly, the adolescent entering the job market is facing a paradigm shift in the world-of-work that is being shaped by technology and globalisation. Adaptability to change and uncertainty has become a core principle in the work market (Maree, 2010).

There is a need to provide the adolescent with a clear, comprehensible and widely-recognised climbing-frame for lifelong career development (Walters, Watts, & Flederman, 2009).  Herein lies the essence of this research:  to equip Grade 11 adolescents with skills, attitudes and information that would facilitate their career development and, thereby, help them develop their own particular career climbing-frame which would ultimately lead to meaningful and sustainable livelihoods.

## 1.2 Background to the research problem

Currently South African teenagers have access to career education and development from the following sources: the school curriculum or government sponsored initiatives; untrained career counsellors; computerised on-line assessments; career exhibitions and work-shadowing; peers; parents and psychologists.  Each of these sources will be discussed and analysed to ascertain their effectiveness in providing South African youth with meaningful career guidance.

**1.2.1 School curriculum and government initiatives.** South African career education has had a disparate history due to the enactment of the apartheid legislation over a period of more than 50 years.  The apartheid system created racially segregated and disparate oppressive social and financial conditions to entrench political dominance of the minority white population group at the expense of other race groups. This disparity affected all aspects of living for disenfranchised South Africans including education and career options. Career education, which formed part of the School Guidance Programme, was introduced into white schools in 1967 and later into black schools in 1981 following the Soweto uprising (Ebersohn & Mbetse, 2003). There were unfair differences in the quality, relevance and value of these programmes across the different education departments as education was typically utilised as a social tool to entrench the objectives of apartheid.  Coupled to this, career practitioners had to contend with an aberrant world-of-work landscape which was constructed

through apartheid policies, for example, job reservation, restrictions to educational institutions, and social engineering.

In post-apartheid South Africa there has been a substantial shift in the labour market as new legislation has endeavoured to redress the imbalances of the past and facilitate democratisation of the country.  Nicholas, Naidoo and Pretorius, cited in Stead and Watson (2006), warn that these laws have significant implications for education, training and work at an individual and at a societal level.  Selective groups of people are receiving good career counselling in post-apartheid South Africa, but the majority of South Africans are still unable to access services (Walters et al., 2009).

The education system forms the dominant locus of career guidance activities (McWhirter & McWhirter, 2012).  With the reconfiguration of the whole education system in the new democratic dispensation, career guidance and counselling was not given a central location in terms of service or curriculum priorities.  In South Africa, learners in many schools are still not being exposed to comprehensive career counselling or guidance with no dedicated career guidance teacher.  As part of the curriculum restructuring that took place in the 1990s, the Education Department attempted to address the lack of career guidance and counselling for all South African learners by introducing career development modules into the Life Orientation curriculum (Ebersohn & Mbetse, 2003). However, the Life Orientation curriculum is not taken seriously as a school subject (Maake, 2013).  There is a trend to utilise teachers who are not trained in guidance and career counselling to teach Life Orientation lessons which often results in the lessons being conducted by people with negative attitudes who view the subject as superfluous and a waste of time (Du Toit, 2010). Furthermore, teachers are receiving information on career education from the Department of Education, but without being equipped with skills that could be helpful in delivering effective career guidance (Mbetse, 2002).  Indeed, many learners do not even know how to calculate their admission point scores or what the selection criteria are for courses at tertiary institutions (Maree & Beck, 2004).

Many learners from all socio-economic schools are not conversant with the entrance requirements to university courses.

Additionally, senior management teams in South African high schools are so beset with a wide range of economic, social, political, and educational challenges in their quest to produce matriculants, that the notion of investing time, effort and money into career development does not, or cannot, even enter into contention (Herr, 2002).

Socio-economic factors play a significant role in this regard. Due to financial constraints, many public schools are often not replacing qualified career-counselling teachers, whereas independent schools are simply outsourcing career education and development to psychologists in private practice. Furthermore, within the context of South African public schools, there are immense differences in the socio-economic environment of schools and inconsistent standards throughout the country. Given that career education falls within the broad definition of education, there are significant differences in the quality of career education being offered at South African schools. The Department of Higher Education and Training have acknowledged that the delivery of an effective career education in many South African schools is not being achieved (Department of Higher Education and Training, 2014).

At the African National Congress convention held in Polokwane in 2009, it was resolved to give career guidance greater priority due to its importance for economic development.  As a result, the government launched a career advice service, Khetha, in June 2010, but it is still in its project phase and currently not able to offer a comprehensive service to all South African youth.  A request to tender for a summative evaluation of the Career Advice Services was published on the National Qualifications Framework (NQF) and Career Advice Services website in February 2013.  In addition, a request to tender for the development of quality controls and information policies relating to the telephone Helpline which is run by 20 advisors of the NQF and Career Advice Services was also published.  Whilst there is some evidence of post-2009 government attempts to address the situation, there is certainly no substantiation that the dire need for

career development services has been met effectively or nationally.  The lack of effective implementation of state policy on career education perpetuates a climate of inequality from which the middle and upper classes of society appear to benefit most in the context of social transformation (Watson, 2010).  Career education and counselling remain a neglected right for many learners from working class and low income communities.

**1.2.2 Untrained career counsellors.** The renewed government interest in career education and the resultant economic opportunities have created a significant growth in private-sector organisations offering career guidance services. There is concern about the upsurge in the number of career counsellors who have not received professional training and there is no legal statutory body to monitor their work and ensure ethical delivery.  There is a move to develop an association called South African Career Development Association to try and regulate the work of lay career guidance providers (South African Career Development Association, 2015).

Ironically, this has also perpetuated the trend of learners with financial resources receiving career education as opposed to the majority of learners who are still unable to access any form of career guidance and counselling.

**1.2.3 Computerised on-line career assessment systems.** Modern technological advancements and innovations have added a new dimension to the field of career psychology as a plethora of on-line career assessment systems, for example, Pace Career Centre and the South African Agency for Science and Technology Advancement, provide different forms of self-assessment and also disseminate career-related information.

The use of internet career assessment systems can have positive implications for the productivity and efficacy of career development service delivery (Dent & Watts, 2006).  These are important considerations given the lack of human and financial resources in the South African context.  It has been suggested that career counsellors consider using online assessments to form part of the assessment process (Miller, Cowger, Tobacyk, & Livingston, 2007).  It seems that career counsellors are encouraged to embrace the new technology

and incorporate their knowledge into these systems.  However, it is contended that it is desirable for internet-based career interventions to be preceded or augmented by a face-to-face interview assessment (Gati & Asulin-Peretz, 2011). The career practitioner is inextricably linked to the process as the 'human mediator' and on-line assessments cannot be a uniform treatment (O'Reilly, 2011).  Accessing information is one part of the career development process, but the process only gains value when the person is enabled to act on it.  While research has clearly indicated that vocational interventions are ineffective when counsellors are not present, there is a growing development of counsellor-free career counselling sites on the internet (Whiston, 2011).

A survey of some self-help on-line assessment internet sites revealed outdated and inaccurate information that confirmed a lack of accountability for reliable information.  Paper-and-pencil assessment versions are still necessary in overcoming equity problems in terms of access to technology (Lumsden, Sampson, Reardon, Lenz, & Peterson, 2004).  This is relevant for the South African context as there are many learners from low socio-economic backgrounds who still do not have access to the internet.  This further highlights the call to find empirically-based solutions to the career development needs of young South Africans.

**1.2.4 Career exhibitions and work-shadowing.**  Private educational institutions or tertiary institutions use career expos and open days as an opportunity to market their courses and institutions to high school students.  While this forms a valuable component of the career decision-making process, the learner is generally not equipped to be discerning of good marketing strategies and ploys.

Work-shadowing is also a useful exercise whereby learners are encouraged to visit companies and observe people at work.  Learners are able to see how skills they are learning in school are applied to a career (Lozada, 2001). This is a useful component of the career exploration process, but is dangerous when used in isolation.  For example, learners can be exposed to jaded employees who are possibly not in careers that is congruent with their profiles or who are struggling with company systems.  For job-shadowing to be of value to

career education and development, it should be planned and organised with opportunity to reflect on the experience and not be merely a field trip.  The learner needs to be educated on how job shadowing forms part of the process that leads to effective career decision-making.

**1.2.5 The role of parents in career development.** Parents are an important resource in a good career guidance system, however, the teacher-parent link in many South African schools is very weak and there is often negligible involvement of parents in the career development of their children (Mathabe & Temane, 1993).  Maite, cited in Buthelezi, Alexander and Seabi (2009), revealed that young South Africans value their parents' involvement in their education as it serves as a means of encouragement.  It was also found that those learners whose parents were less involved in and supportive of their career development showed delayed career planning and diminished levels of motivation (Buthelezi et al., 2009).  Conversely, over-involved parents can dominate and control the process resulting in teenagers abdicating ownership and responsibility for their career development.  In addition, unrealistic career expectations by parents can make realistic career choices by children difficult.

**1.2.6 The role of psychologists in career development.**  South African psychologists and counsellors have generally relied on individual interviews and psychometric assessments as a means to assist people with their career development (Maree & Beck, 2004). Indeed, Watson (2010) asserts that the profession of psychology in general has negatively contributed to social justice issues in South Africa.  Psychometric testing in South Africa has had a divisive history and is still fraught with challenges.  For example, tests were used unethically to promote the political notion of white superiority during the apartheid era; often South African norms have not been developed for international tests and psychometric assessments are often not valid, reliable and appropriate for the diversity of South African cultures (Maree & Beck, 2004).  Consequently, there tends to be a negative perception regarding the usefulness of psychological measures and many South Africans reject the use of psychometric testing. There

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needs to be a balance between the western models which emphasise individual values and those that stress collective societal values (Naicker, 1994).

Holland (1978) contends that interview-orientated approaches have limitations that are indicative of the counselling profession's inability to keep pace with the needs of a growing, industrialised society.  The ratio of learners to psychologists is 6687 learners to every one psychologist (Jimerson et al., 2008).  Furthermore, the cost effectiveness and affordability for the general public of personal and individual-based career counselling is certainly questionable.  The one-on-one counselling process is not viable in African countries and there is a desperate need for a different methodology that could assist a large number of citizens (Maree, 2010).  National coverage of career guidance and counselling is missing: South African adolescents need a model for a systemic delivery of career guidance which is co-ordinated and accessible to all young South Africans (Walters et al., 2009).

## 1.3 Research problem

While there is evidence of pockets of progress in the career education field in South Africa, many young people are still left to their own limited resources to formulate a plan for their future careers.  The crucial need for an empirically supported career education system for <u>all</u> South African youth is manifest.  More specifically, there is a need for an effective career development programme which is accessible to all South African teenagers.  Mass intervention strategies need to be implemented to address the career needs of the majority (Pillay, 2003).

Most school-based intervention programmes can bring about positive outcomes in students (Lavoritano & Segal, 1992). Career interventions in schools have positive effects that go beyond career competencies, for example, effective career education strategies can help learners who are at risk of dropping out of high school to stay on course with their education and realise their potential.

Without thorough evaluation, career development programmes will not receive the support and funding which they require (Bernhardt, 1998). Indeed, there is a necessity to evaluate the effectiveness and utility of career development interventions in educational and counselling settings as a means to increase the value and generalisability of constructive interventions (Betz, 1991). This study aims, therefore, to develop and empirically evaluate a group based career development programme for Grade 11 South African learners.

## 1.4 Theoretical framework

A career development programme should have central concepts that form the main thrust of the intervention and which are underpinned and informed by a particular theory. In general, South African career education programmes have largely been based on Holland's typological-interactive theory and Super's career development theory (Akhurst & Mkhize cited in Stead & Watson, 2006). Holland's theory has evolved from the trait-factor theory which essentially sought to match a person's career interest profile with similar study or work attributes. Career decision-making was insulated from contextual factors and was viewed as an event and not a process. He developed the Self-directed Search instrument whereby he identified six different types of vocational interests in relation to the world of work, namely, realistic; investigative; artistic; social; enterprising; and conventional. The Self-directed Search was adapted for use in South Africa (Bisschoff, 1987).

Super's career theory introduced the developmental nature of career behaviour whereby he identified life-stages which were characterised by different career developmental tasks. Super's career theory incorporated the construct of career maturity where a person's career behaviour was compared with the developmental tasks of his/her life-stage. Measures of career maturity were developed and the concept was used to form the theoretical framework of many South African career education programmes. Langley (1990) developed a South African measurement of career maturity known as the Career Development Questionnaire.

Essentially, Holland's and Super's theories were based on western, individualistic and middle class values and have been critiqued for not taking into account values of other cultures and the community-mindedness of the learner living in an African culture.  Career maturity as a concept has been criticised for its value-laden connotations and its failure to consider a person's context (Watson & Stead, 2006). Super acknowledged this when he visited South Africa in 1988 and commented on the need for an African or Asian person's career decisions to fit into the family's wants and needs (Watson & Stead, 2006). Indeed, career intervention programmes do not happen in a vacuum and have to be designed and developed to take local contextual factors into account (Ali, Yang, Button, & McCoy, 2012).

The South African context is complex (Watson, 2010). South Africa is a country where there is extensive diversity in a range of sectors, for example, geographic regions, ethnicities, languages, levels of poverty and wealth (Walters et al., 2009). There are a multitude of issues, challenges and systemic interactions that can enhance or interfere with the delivery of a programme and researchers need to guard against decontextualising the learner from his/her milieu. There is a call for South African psychology researchers to make international theories applicable to the South African context.  It is only when theory can be interpreted according to a particular context that it becomes meaningful to the people living within that context (Bernard-Phera, 2000). Nevertheless, Stead and Watson (2006) warn against overemphasising the western and non-western dichotomy and argue that researchers should be seeking to answer whether career psychology in South Africa is appropriate in its context, and not whether career psychology should be parochial or not.

Post-modern career theory seeks to facilitate a process of empowering people, assisting them in accumulating skills to cope with the adaptations and uncertainties of the 21$^{st}$ century work world.  The individual is viewed and understood as an integral part of a society or community.  Savickas (2001) developed the Career Construction Theory where people are helped to construct their own life story and careers by imposing meaning on their work-related

behaviour and experience in the work place. Maree and Beck (2004) found that, while the post-modern narrative approach to career counselling addresses a number of flaws in the traditional approach, especially in respect of disadvantaged learners, it is a lengthy process and expensive.

Another approach that takes the interaction of the individual and his/her environment into account is Lent, Brown and Hackett's (1994) Social Cognitive Career Theory (SCCT).  The SCCT, based on the socio-cognitive theory of Bandura, builds on the assumption that several cognitive variables play an important role in career decision making (Beale, 2001). Most significantly, however, is the focus on how these variables interact with other aspects of the person and his/her environment to help shape the course of career development (Geijsendorpher, 2008; Lent, Brown, & Hackett, 2000).  SCCT has emerged as a valid and frequently used framework for understanding academic and career choice (Betz, 2008; Lent, et al., 2008). It is averred that SCCT is a more appropriate theoretical model for use in South Africa than traditional career theories as it incorporates the influence of the social environment and other contexts on a person's career development (de Bruin, 1999). Hence, the career education programme developed for this study was designed on a social cognitive career theoretical framework.

**1.4.1 Career decision-making self-efficacy.** The evaluation of an intervention programme is achieved by examining the impact the programme has on central constructs or specific indicators. Existing psychological research covers a range of constructs evaluated in career development programmes, for example, career maturity (Luzzo, Funk & Strange, 1996; Cassie, 2006); self-esteem (Legum & Hoare, 2004); academic motivation (Sutherland, Levine, & Barth, 2005); social cognitive variables such as self-efficacy, vocational skills self-efficacy, outcome expectations, perceived educational barriers and career expectations (McWhirter, Rasheed, & Crothers, 2000); and career decision-making self-efficacy (Reese, 2006).

The concept of career decision-making self-efficacy plays a central role in career decision-making; indeed, it may be viewed as one of the goals of career

counselling. A central construct of SCCT, career decision-making self-efficacy (CDMSE), can be defined as a person's degree of belief that h/she can successfully complete tasks necessary to making career decisions (Betz, 2000). The construct encapsulates career behaviours such as accurate self-appraisal; gathering occupational information; goal selection; making plans for the future and problem-solving.

SCCT has formed a useful framework for helping researchers understand career self-efficacy's role in career behaviours (Choi et al., 2012). It is contended that career interests do not develop from a person's abilities, but rather from having the confidence of being able to perform the task. Significantly, career interests lead to the setting of career goals and career related activities. There is evidence that the CDMSE construct is dynamic and career interventions can be successful at enhancing a person's efficacy for making career decisions (Scott & Ciani, 2008). It follows that CDMSE should be the treatment focus in the development of career interventions (Lent & Hackett, 1987). An objective of the present study, therefore, was to evaluate the impact of a career development programme based on the construct of CDMSE.

**1.4.2  Academic motivation.** Consistent with SCCT core constructs, high school learners are not passive in their environment and are engaging in goal directed behaviour. This involves motivation, more specifically, academic motivation, which is viewed as one of the most important psychological concepts in education (Vallerand et al., 1992).

There appears to be a link between career development and academic motivation as career development forms an integral part of academic planning and goal setting and can be used to give school work meaning as the adolescent starts to make the link between his/her academic pursuits and his/her future. Career development gives education relevance. The labour market has undergone exponential change which has resulted in fundamental characteristic changes. Yesterday's world-of-work was characterised by security, loyalty, certainty, specializations, paternal management, and external locus of control whereas today's world-of-work is synonymous with change, flexibility, multi-

skilling, positive uncertainty, internal locus of control and responsibility for creating and marketing one's own personal brand. Career development fosters the knowledge that learners need to actively engage in and take responsibility for their own education.  Dykeman et al., 2003) claim that there is a lack of research establishing a connection between career development interventions and academic achievement or other positive student outcomes and embarked on an extensive pilot study to examine the relationship between participation in career development interventions and academic motivation and academic self-efficacy. Indeed, an extensive literature search provided no evidence of a South African study where the relationship between career development and academic motivation had been undertaken.  It would thus appear to be important to explore the relationship between CDMSE and academic motivation which may also prove valuable in developing ways to improve academic performance.

There are numerous theoretical approaches to understanding, defining and operationalising motivation, for example, self-efficacy, attributions, goal orientations, and self-worth.  The self-determination theoretical framework was selected to use for this study because it incorporates the notion of interpersonal environment and its effects on motivation.  Social contexts are characterised in terms of the extent to which they are autonomy-supportive versus controlling. Research confirms that autonomy-supportive contexts enhance autonomous motivation whereas controlling contexts diminish autonomous motivation and enhance controlled motivation (Deci, Eghrari, Patrick, & Leone, 1994). While the assumptions of the self-determination theory have been confirmed empirically in western cultures, it has also been found to be empirically useful in a South African, Russian and Japanese setting (Müller & Louw, 2004).

Self-determination theory delineates three types of motivation: intrinsic, extrinsic, and amotivation. Intrinsic motivation refers to doing an activity for the pleasure and satisfaction derived from participating in the task or behaviour; extrinsic motivation refers to performing an activity as a means to an end, to satisfy an external demand or reward; amotivation refers to being neither intrinsically nor extrinsically motivated to perform an activity (Turner, Chandler, &

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Heffer, 2009).  People who are experiencing amotivation generally perceive their behaviour as being controlled by things out of their control. Typically, better test performances are achieved when students engage in learning with intrinsic goals as opposed to engaging in behaviours with an extrinsic goal (Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004).

It seems that there is a relationship between CDMSE and academic motivation which would be valuable to investigate. Thus in addition to assessing the impact of a career development programme on learners' CDMSE, this study will also examine the impact of the programme on learners' academic motivation and the relationship between CDMSE and academic motivation.

**1.4.3 Socio-economic status.**  To be able to understand the complexity and the important role of career guidance and counselling in South Africa, it is necessary to appreciate the diverse socio-economic context.   Major socio-economic challenges faced by South Africa relate to inequality, high levels of unemployment, oversupply of low or unskilled workers, a shortage of high-skills workers and large numbers of its population living in rural areas (SAQA, 2012). Indeed, South Africa is a country with a vast socio-economic diversity with the minority living in a first-world context and the majority living in a third-world context (Watson, 2010). South Africa's Gini coefficient ranges between 0.60 and 0.77 which indicates that the South African society is characterised by economic inequality when compared with other countries who typically have a Gini coefficient between 0.3 and 0.5 (News24, 2015).   The level of inequality is amongst the worst in the world (McGrath & Akagee, 2007).

Economic inequality impacts on all sectors and infrastructure of society, including the education system.  Despite twenty years of a democratically-elected South African government attempting to address inequality in education, South African schools are still characterised by immense socio-economic differences. Moreover, research has indicated that socio-economic status (SES) has a substantial influence on South African Grade 12 examination results as the very large differentials in academic performance correlate with households' income measures of poverty (Jukuda, 2011). Consonant with the view of SES influencing

academic performance, career theorists are of the opinion that socio-economic factors are important determinants of career behaviour (Naidoo, 1998). Career counselling in South Africa in historically disadvantaged contexts is still characterised by socio-economic challenges.

From the SCCT perspective, SES has been considered as one of the core contextual factors that has an impact on the development of a person's self-efficacy beliefs and outcome expectations and, therefore, needs to be taken into account when examining career development.  Arulumani and Nag-Arulmani, cited in Buthelezi et al. (2009), posit that contexts of social and economic disadvantage can limit learners by witnessing more failures than successes in respect of career direction, achievements and lifestyles.  More than 50% of South African children consistently fail or drop out of school (Watson, 2010). Challenges encountered by peers tend to foster low self-efficacy beliefs, lack of motivation, lack of confidence and a sense of hopelessness. For example, high dropout rates of learners from disadvantaged contexts tend to impact negatively on their peers' sense of self-efficacy and thus barriers to career aspirations are formed.  This contention has been corroborated by findings that indicate that learners' from higher socio-economic backgrounds have stronger aspirations to attend university (Bowden & Doughney, 2010). Indeed, research findings have indicated a significant SES-CDMSE relationship (Huang & Hsieh, 2011).  A learner may compromise or prematurely give up on positive occupational options due to low self-efficacy beliefs which may have primarily originated from their context.

Research has found that people from a lower socio-economic background as compared to those with a higher socio-economic status tended to have jobs that were not consistent with their interests and goals, and they also reported fewer external academic and vocational resources (Whiston, 2011). Effective career guidance education can raise the aspirations of disadvantaged groups and support them in gaining access to opportunities and resources.  Rodrigues and Blocher cited in Naidoo (1998) found that the career maturity and locus of

control of learners from academically and economically disadvantaged backgrounds can be enhanced by a career intervention.

The relationship between career development, SES and educational background needs research attention due to the essential role the relationship plays in optimal career development (Schreuder & Coetzee, 2012).  Whiston (2011) cautions researchers to guard against studies that employ vague, one-size-fits-all treatments that perpetuate the myth that career interventions are standard across clients, regardless of their background characteristics, goals, and particular vocational difficulties. While it is acknowledged that not all learners from a particular school will necessarily share the same socio-economic background, a school career development intervention aims to address collective needs in addition to/opposed to individual needs.  It was, therefore, envisaged to present this study's career development programme to learners from schools from three different SES levels in order to gain a clearer understanding of the impact of SES on a career development intervention.

## 1.5 Research question

The problem statement is: Can a career development intervention enhance the CDMSE and academic motivation of Grade 11 learners from diverse socio-economic backgrounds? Additionally, can a career intervention programme affect the correlative relationship between CDMSE and academic motivation?

## 1.6 Purpose of the study

There are three primary goals of the study: firstly, to design and develop a career intervention programme that would enhance CDMSE and academic motivation; secondly, to examine the impact of the career development programme on Grade 11 learners' CDMSE and academic motivation, and, thirdly, to discern whether socio-economic status impacts on the career development programme's objectives.

There were three secondary goals, firstly, to evaluate the correlational relationship between career decision-making, self-efficacy and academic

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motivation; secondly, to make recommendations for future Grade 11 career development programmes aiming to enhance career decision-making, self-efficacy and academic motivation; and, thirdly, to make recommendations for future Grade 11 career intervention programmes in relation to socio-economic status.

## 1.7 Overview of chapters

This dissertation has the following structure: Chapter one served as an introductory orientation to the study where the purpose of the study and research question was elucidated. The theoretical framework was established and the core constructs of CDMSE and academic motivation were identified and discussed.  The notion of socio-economic status was discussed and the rationale for including it as a background variable was given.

Chapter two will provide, firstly, an examination of the conceptual framework of Social Cognitive Career Theory and the core constructs of the theory, namely, self-efficacy expectations; outcome expectations and choice goals. In addition, the dynamics of the Social Cognitive Model and the empirical evidence related to the model will be considered as well as the impact of contextual factors on the career decision-making process. Secondly, this chapter will investigate the theoretical construct of academic motivation drawing on five key constructs used in motivational theory, namely, self-efficacy; attributions, self-determination, goal orientations; and self-worth. Additionally, academic motivation will be considered in relation to contextual factors and a career development programme.  Thirdly, SES will be defined and research which explores the effect SES has in relation to career development will be reviewed.

Chapter three provides an in-depth theoretical rationale and description of the design of the career intervention programme developed for this study. The chapter will explain how the primary goals of the study were operationalised through the design of the programme.  The programme's structure of five phases will be explicated, concluding with a discussion of personal agency.

Chapter four will discuss the orientation and explanation of the research methodology utilised in the study. More specifically, the objectives and hypotheses of the study will be summarised; the sample, research design and procedure and measuring instruments will be described and their psychometric properties reported, and the statistical analysis procedures that were employed will be presented.  Finally, the ethical considerations of the study will be discussed as well as a reflexivity account of the researcher will be given.

In Chapter five the results and interpretation of the statistical analyses will be presented.

Chapter six serves as the conclusion of the study. The findings with regard to the impact of the career development programme on CDMSE and academic motivation and the impact of socio-economic factors of the learners and schools on the results of the programme will be discussed.  Limitations and strengths of the study will be acknowledged and recommendations for future research will be given.

## 1.8 Chapter summary

In this chapter the background and rationale for the study were outlined. The chapter further served to establish the theoretical framework of the research and the core constructs were identified.  The problem formulation and the purpose of the study were clearly addressed through the stated goals of the research.

*CHAPTER 2*

**LITERATURE REVIEW**

*"Our doubts are traitors, and make us lose the good we oft might win, by fearing to attempt."*

William Shakespeare

## 2.1 Introduction

Chapter one served as an introduction and orientation to the study where trends in career education and career development for South African adolescents were discussed. The need for a group intervention whereby all South African youth could access career guidance was highlighted.

This chapter will, firstly, explore the current trends in South African career guidance and education.  Secondly, an in-depth discussion of the theoretical framework and literature which informed and guided this study will be provided. More specifically, the SCCT theoretical framework will be elaborated on by describing and analysing the three primary constructs pertinent to the theory as well as examining the current research literature related to these constructs. Furthermore, the Social Cognitive Model, which was borne out of an attempt to explain the interactive nature of the core constructs of SCCT, will be explained and the empirical evidence related to the model will be considered.  The interplay between environmental issues, personal factors and career decision-making will be discussed.  Thirdly, this chapter will discuss five motivational theories which align with SCCT principles, namely, Self-efficacy theory; Attribution theory; Achievement goal theory; Self-worth theory of motivation; and Self-determination theory.  A rationale will be provided for utilising self-determination theory in this study as the theoretical framework for operationalising the construct of academic motivation. Academic motivation will also be considered in relation to contextual factors of the participants.  Finally, the significance of socio-economic status on career education will be addressed, as well as the need for considering the impact of SES on South African schooling.

## 2.2 Trends in South African career guidance and education

Although the new democratic South Africa was established in 1994, it was only from 2009 that the South African government began a process of addressing the needs of the country's career education and career counselling services. A review of the South African career guidance landscape conducted in 2009 (Flederman, 2011) confirmed the legacy of apartheid continued whereby adolescents from affluent backgrounds were accessing help from psychologists and the majority of young South Africans were receiving minimal to no career guidance. Four proposals were made by the review: to improve the quality of available career information; to substantially expand career guidance services; to foster professionalism within the field with particular reference to career development practitioners and to develop a body with strategic leadership to manage the evolution of career development in South Africa (Walters et al., 2009).

In 2010, the South African Qualifications Authority was awarded R100 million by the National Skills Fund to establish and manage a new career development helpline as the spine of a national career guidance system (Flederman, 2011).  The Minister of Higher Education and Training, Dr Blade Nzimande, stressed the need to address inadequate career counselling in the *Green Paper for Post-School Education and Training* (DoHE, 2012). In 2012, the Department of Higher Education and Training (DHET) partnered with SAQA in an initiative to develop a policy framework for the provision of a national model of career guidance services and activities for all age groups of South Africans.  Four main influences were evident in the development of the career model. Firstly, career advice services were aligned directly to the qualifications framework.  By utilising the national qualification framework, informal learning is treated as equivalent to formal learning, which facilitates the process of addressing inequalities of the past (Parker & Walters, 2008).  Secondly, the *Careers Research and Information Centre,* which had provided non-racially based career information and counselling services to large numbers of people during the apartheid years, was used as a model. Indeed, career guidance services can

raise the aspirations of people from low socio-economic backgrounds and help them gain access to opportunities they might not have had.  Thirdly, there was a shift away from the 'test and tell' tradition utilised by psychologists to a nationally based service which incorporated an inclusive approach in partnership with other stakeholders.  Fourthly, advice was sought from similar initiatives in the United Kingdom and New Zealand (Keevy, Steenekamp, & West, 2012).

The Career Advice Services (CAS) was established and consists of a website, a helpline, a social network, a walk-in centre and social marketing campaigns. There is still, however, no single agency at national or provincial level with the responsibility for the management and provision of career guidance and counselling services in South Africa.

Furthermore, this initiative has not addressed career development and guidance in the educational sector and many students still tend to embark on courses without a realistic idea of the career field in which they are investing time and money.

Career guidance ideally should be an intricate component of the South African education system.  It is common knowledge that career guidance activities vary considerably from one school to another and schools are not able to provide sufficient and comprehensive assistance to learners when they choose school subjects or study fields (SAQA, 2012).  Many schools do not have Life Orientation teachers who have sufficient knowledge and experience with regard to career guidance.  In addition, schools in the affluent areas often have established career guidance practices and use the services of psychologists, whereas schools from low socio-economic backgrounds are poorly resourced and generally have limited, if any, access to the latest career assessments and information resources.

There has been a call to professionals specialising in career development and career guidance knowledge to assist the Department of Basic Education in developing a relevant curriculum with regard to career guidance at school level (SAQA, 2012). In terms of legislation and career information, guidance and counselling, the Curriculum and Assessment Policy Statement for Life

Orientation Grades 10 to 12 (January 2012) provides the framework for career development during the last three years of school.  Career development, *Careers and Career Choices,* is one of six topics in the subject called Life Orientation. The other five topics are: *Development of the self in society; Social and environmental responsibility; Democracy and human rights; Study skills; and Physical Education.* The annual teaching hours allocated for the topic 'Careers and Career Choices' are eleven hours in Grade 10, eight hours in Grade 11, and eight hours in Grade 12. Table 2.1 shows the teaching curriculum of the Life Orientation topic of *Careers and Career Choices.*

While South African career education legislation, implementation and development is beset with a myriad of challenges and problems, Watson (2010) noted that the shift in South African career psychology from quantitative towards qualitative career approaches has still not addressed the needs of most South Africans who have minimal access to career services.  Maree (2012, p. 663) succinctly poses the question: "How can career counselling be tailored and applied to make it more useful to many thousands of students, especially poor and marginalised students, who receive little or no career counselling and are consequently either excluded from sought-after fields of study at institutions of higher learning or lose interest in their studies after having enrolled for particular fields of study?"  He is of the opinion that a quantitative approach combined with qualitative elements is the direction that South African career counselling should pursue where career construction and life designing underpin the process (Maree, 2012).  This approach has been gaining support for a number of years. Hartung (2009) identified the value of integrating positivism and constructivism to enrich the process and outcomes of career assessment and counselling for all South Africans.

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Table 2.1: *Teaching Plan for Careers and Career Choices*

| TEACHING PLAN FOR CAREERS AND CAREER CHOICES | |
|---|---|
| **Grade 10:** | Subjects |
| | Career fields |
| | Study Choices |
| | Socio-economic factors |
| | Opportunities within career fields |
| | Diversity of jobs |
| | Trends and demands in the job market |
| | The need for life-long learning |
| **Grade 11:** | Requirements for admissions to higher education institutions |
| | Options for financial assistance for further studies |
| | Competencies, abilities and ethics required for a career |
| | Personal expectations in relation to job or career of interest |
| | Knowledge about self in relation to the demands of the world of work and socio-economic conditions |
| **Grade 12:** | Commitment to a decision taken |
| | Reasons for and the impact of unemployment and innovative solutions to counteract unemployment |
| | Core elements of a job contract |
| | Refinement of portfolio of plans for life after school |

There has generally been a fragmented approach with legislators and career researchers working independently of each other (Watson, 2010). The current study seeks to form a link between the practical realities and logistics of career education and the need for a theoretical, empirical investigation. Indeed, developing an effective career intervention programme <u>within</u> a theoretical framework, which can withstand the rigours of an empirical evaluation, and have

practical value in ALL schools, will work towards addressing some of the foundational problems faced by South African legislators, educators, career theorists, and, most importantly, South African youth.  Maree (2013) endorses these contentions as he argues for a sound career counselling theory where outcomes are clearly stipulated and easily measurable.  One such theory that holds promise as a basis for a career development intervention is the Social Cognitive Career Theory.

## 2.3 Social Cognitive Career Theory (SCCT)

As discussed in Chapter one, the career education programme developed for this research was based on a SCCT theoretical framework. The theoretical premise of the SCCT originates from Bandura's (1977, 1986) social cognitive theory and Krumboltz's (1979) social learning theory. Social cognitive theory (SCT) posits that learning occurs in a social context with a dynamic and reciprocal interaction of the person, environment, and behaviour.  SCT emphasizes that learning occurs in a social context and that much of what is learned is gained through observation. Krumboltz's (1979) social learning theory contends that people bring genetic and social inherited attributes to their environment and these interact to produce the self view.  Conceptually, SCCT is most closely aligned with Betz and Hackett's (1981) position as SCCT focuses on the belief systems that influence career behaviour and is a conceptual framework that emphasises understanding people in their context.  More specifically, SCCT maintains that environmental and personal factors, for example, socio-economic status, genetics, culture, abilities, interests, needs, and personality variables, play a significant role in determining career-related behaviour.  SCCT share Krumboltz's (1979) emphasis on learning experiences such as direct and vicarious learning, and their influence on occupational interests, values, and choices. Nevertheless, SCCT differs from Krumboltz's (1979) conceptualisation of cognitive processes and specific outcomes. SCCT focuses more on cognitive, self-regulatory and motivational processes that move beyond learning and conditioning (Lent, Brown, & Hackett, 2002).

SCCT is applicable to the South African context as environmental factors are essential to our understanding of career choice in a country which is characterised by extensive economic, cultural, and educational variances (Naicker, 1994; Stead, 2005).  Socio-political factors also play a significant role in career behaviour and, therefore, need to be taken into consideration when examining the career development of South Africans.

SCCT describes an interrelated and dynamic model of career development and proposes three core constructs or processes, namely: self-efficacy expectations, outcome expectations and choice goals.

**2.3.1 Self-efficacy expectations.** The concept of self-efficacy appraisals, as originated by Bandura (1977), refers to a person's beliefs about his/her ability to successfully perform a task or behaviour.  Simply stated: "Can I do this?"  Self-efficacy beliefs occur on an emotional and cognitive level (Brown, Reedy, Fountain, Johnson, & Dichiser, 2000) and are not unitary, fixed, or de-contextualised.

Self-efficacy beliefs influence behaviour and can therefore be particularly valuable in understanding and predicting behaviour. More specifically, self-efficacy expectations have at least three behavioural consequences, that is, 'approach versus avoidance' behaviour, quality of performance of behaviours in the target domain, and persistence in the face of challenges or disconfirming experiences.

The construct of self-efficacy was first applied to career behaviour by Betz and Hackett (1981) in a study in which they were trying to identify the causal factors of career indecision in women's career development. It was through this research that the impact of self-efficacy beliefs on career behaviours was identified.   Indeed, the three behavioural consequences of self-efficacy expectations provided a valuable explanatory construct for understanding career-related issues.   Firstly, the 'approach versus avoidance' behaviour helped psychologists understand and describe people's willingness to engage in career exploratory behaviour and career choices as opposed to reluctance to initiate any career-related behaviours. Self-efficacy expectations is a strong motivator of

behaviour as the task is more likely to be attempted if the person believes that he/she is able to do it. It is contended that high self-efficacy expectations will lead to a high frequency of 'approach' behaviour, for example, exploring university course options. Low self-efficacy expectations would likely lead to an avoidance of tasks, for example, the avoidance of researching course options. Moreover, Betz and Hackett (1981) identified low self-efficacy in women with regard to traditionally male-dominated areas such as mathematics, the sciences, and engineering/technology careers.

Secondly, SCCT asserts that self-efficacy expectations influence the effort one is willing to invest in a task and therefore affects the quality of a person's work.  High self-efficacy expectations, for example, would be likely to enhance a student's performance in a National Benchmark Test (such as the matriculation examinations) whereas low self-efficacy expectations would be associated with a poorer performance.

Thirdly, self-efficacy expectations impact on a person's tenacity to pursue goals and can influence a person's persistence when faced with challenges or adversity.  High self-efficacy expectations will increase a person's persistence in pursuing their career goals despite challenges or failure, whereas low self-efficacy expectations generally lead to a person giving up when faced with adversity such as discouragement, discrimination or failure.

The formation of self-efficacy beliefs begins in early childhood as a person deals with life experiences, tasks and situations and continues to evolve throughout their life.  Bandura (1977, 1986) identified four sources of information through which self-efficacy expectations can be learnt or modified.  Firstly, a person develops a strong sense of efficacy through mastery experiences, that is, the experience of successfully performing a task or behaviour.  Conversely, failing to adequately deal with a task or challenge can undermine and weaken self-efficacy beliefs.  Moreover, to strengthen a moderate level of self-efficacy to a strong sense of self-efficacy, a person needs to succeed on more difficult tasks.  Personal accomplishment and mastery experience is the most robust source of self-efficacy information (Brown et al., 2000).  The experience of

completing a task successfully would raise self-efficacy, whereas repeated failures would lower self-efficacy beliefs related to the particular task. Secondly, vicarious learning and modelling is another source of self-efficacy. People form beliefs about their own efficacy when they observe another person, whom they perceive as similar to themselves, successfully complete a task. The person's self-efficacy is raised as he is able to develop the belief that he too has the capabilities to master the relevant behaviour. Likewise, observing failure in a similar model can reduce perceived self-efficacy. Thirdly, self-efficacy beliefs are enhanced through social persuasion. Through encouragement and support people can be helped to believe that they have the skills and capabilities to succeed at a task. It is important that the task is within the capabilities of the person otherwise failure on the task will be more detrimental to perceived self-efficacy than a person not engaging in the task initially. Fourthly, a person's emotional reactions to situations also play an important role in self-efficacy beliefs. High levels of anxiety and the concomitant physiological responses influence a person's beliefs about his/her personal abilities in a particular situation. It is not the intensity of the physical reactions that is important, but rather the interpretations made by the person about the physiological responses.

These four sources of self-efficacy information interact with personal variables and characteristics, as well as environmental and contextual factors. Understanding the source of self-efficacy is valuable for the design of interventions where self-efficacy can be built or strengthened in a particular domain (Betz, 2000).

The concept of self-efficacy beliefs is specific and therefore needs to refer to a specific behavioural domain to be meaningful. Indeed, with respect to career-related issues there are numerous behavioural domains, for example, job search self-efficacy; career decision-making self-efficacy; and occupational self-efficacy. The term 'career self-efficacy' needs to be used with caution as it does not refer to a specific behavioural domain. It has been used to encapsulate research which has applied self-efficacy theory to numerous behavioural domains relevant to the career development process. A further important

distinction has been made between two domains of career self-efficacy: the content and process domains of career decision-making. The content domain of career self-efficacy refers to self-efficacy in particular career fields, for example, natural science, engineering, or education. The process domain of career self-efficacy refers to self-efficacy in relation to activities involved with the decision-making process. These characteristic differences of the domains relate to different sets of variables and, therefore, have implications for self-efficacy measurements, for example, content-domain self-efficacy measurements have been developed to assess self-efficacy for choosing university majors (Fouad, Smith, & Zao, 2002; Lent et al., 2001; Lent et al., 2003) and process domain self-efficacy measures have been developed to assess career search activities (Solberg et al., 1994) and career decision-making behaviours (Taylor & Betz, 1983). This study focuses primarily on measuring the process domain self-efficacy, in other words, the focus is on a person's ability to successfully perform career decision-making activities as opposed to the type of career s/he will choose.

Active exploration of self and environment, underpinned with personal agency, are important ingredients in the career development process. Strong self-efficacy is viewed as critical for mobilising personal agency to explore self and the environment whilst low career decision-making self-efficacy (CDMSE) can be detrimental to optimal career choice and development. The assumption behind CDMSE is that effective career decision-making involves both the development of skills as well as confidence in one's decision-making abilities (Hackett & Byars, 1995).

In essence, CDMSE describes the extent to which a person believes he/she can successfully complete various tasks and activities associated with career decision-making (Taylor & Betz, 1983) and will be the term used in this study to describe the process.

CDMSE was operationalised by Taylor and Betz (1983) in a measure called Career Decision-Making Self-Efficacy Scale. It was designed to measure a person's degree of confidence to successfully complete tasks necessary for

making career decisions.  The CDMSE scale consists of five subscales: accurate self-appraisal; gathering occupational information; goal selection; making plans for the future; and problem-solving, which are all viewed as essential elements of CDMSE.  The Career Decision-Making Self-Efficacy Scale – Short Form will be used to measure CDMSE in this study.  More psychometric data about this instrument is presented in chapter four.

**2.3.1.1 Review of research findings on CDMSE.**  The construct, CDMSE, has generated extensive research in career literature and empirical findings have confirmed positive relationships between CDMSE and a diverse range of career-related behaviours, for example, differentiated vocational identity (Gushue, Scanlan, Pantzer, & Clarke, 2006); occupational self-efficacy (Taylor & Popma, 1990); general self-efficacy and self-esteem (Robbins, 1985); preference for growth in one's career (Gianakos, 2001); non-traditional career choice amongst female adolescents (Flores & O'Brien, 2002); career exploration behaviour (Blustein, 1989; Rogers, Creed, & Glendon, 2008);  career planning and development (Gushue & Whitson, 2006; Lease, 2006; Lent et al., 2001; Lent et al., 2003; Lent et al., 2005); career adjustment (Betz & Luzzo, 1996); career decision-making attitudes and skills (Amir & Gati, 2006; Luzzo, 1993, 1995, 1996).

Research has also highlighted the link between CDMSE and psychological variables like internal locus of control (Taylor & Popma, 1990); global self-esteem (Betz & Klein, 1996); and self-esteem and vocational identity (Brown, Reedy, Fountain, & Johnson, 2000; Choi et al., 2012; Creed, Patton, & Bartrum, 2004; Koumoundourou, Kouonenou, & Siavara, 2012; Solberg et al., 1994; Wang, Jome, Haase, & Bruch, 2006).  Choi et al. (2012) have questioned the fact that the role of self-concept is not taken into account more in understanding the CDMSE construct and argue that this justifies further research attention.  Indeed, the close relationship evidenced between CDMSE and self-concept is critical in directing effective design in career development programmes, as understanding the influence of the self-concept configuration would necessitate more attention to personal development and personal agency.

Research consistently found evidence for a negative relationship between CDMSE and career indecision (Bergeron & Romano, 1994; Betz & Luzzo, 1996; Lopez & AnniYi, 2006; Taylor & Betz, 1983; Taylor & Popma, 1990).  This substantiates and validates career interventions focusing on CDMSE.  Choi et al. (2012) contend that focusing on improving CDMSE may be one of the most efficacious strategies for addressing career indecision.  Studies have also demonstrated a negative relationship between CDMSE and isolation from others (Gianakos, 2001); fear of commitment (Wolfe & Betz, 2004); and scholastic aptitude (Amir & Gati, 2006; Taylor & Betz, 1983).

SCCT places emphasis on the context in which self-efficacy is examined and, therefore, a great deal of research has investigated socio-cultural variables. Studies have indicated varying findings for the relationship between career barriers and CDMSE.  Several studies (Betz, Hammond, & Multon, 2005; Brown et al., 2000; McWhirter, Rasheed, & Crothers, 2000; Wang, Jome, Haase, & Bruch, 2006) failed to find a relationship between career barriers and CDMSE. Nevertheless, some studies have reported significant relationships between CDMSE and career barriers (Choi et al., 2012; McWhirter et al., 2000; Patton & Creed, 2007).  Choi et al. (2012) argue that this could possibly be as a result of different aspects of career barriers being measured.  Definitions and perspectives of constructs and variables need to be clearly defined and delineated for the purposes of this study.

Gushue (2006) reported that ethnic identity had a direct and positive relationship to CDMSE.  Mau's (2000) study showed significant differences in career decision-making style and CDMSE as a function of nationality and gender. Furthermore, the study indicated that cultural background impacted on career decision-making styles and CDMSE.

There is empirical evidence for a significant relationship between CDMSE and proximal contextual factors.  Family/parental influences were found to be positively correlated with students' career self-efficacy (Hargrove, Creagh, & Burgess, 2002; Roach, 2010; Whiston, 1996). Moreover, general supportive parenting behaviours seemed more significant than career-specific parenting

behaviours. Lease and Dahlbeck, (2009) found parental attachment was significant for females' CDMSE but not for men.   Blustein, Wallbridge, Friedlandler, and Palladino (1991) did not find an association between these two variables. Peer support is another contextual variable which research has found to be consistently linked to CDMSE.  Patel, Salahuddin and O'Brien (2008) found peer support was predictive of career decision-making self-efficacy.   The importance of social support is highlighted and the need to promote the concept of networking and support systems in the career intervention programme is underscored.

Empirical investigations have primarily used correlational and cross sectional designs with convenience samples of university students and only a few studies have used high school participants (Prideaux & Creed, 2001). Research undertaken on high school students includes a study where Anderson and Brown (1997) found that career development attitude was able to predict CDMSE for rural and urban pupils; Larson and Majors (1998) used the CDMSE scale and found personal agency and affective distress influenced career indecision in gifted high school pupils; Brown, Darden, Shelton and Dipoto (1999) found pupils' beliefs about career exploration significantly related to CDMSE.  De Bruin and Bernard-Phera (2002) found support for the construct validity of the Career Development Questionnaire and the CDMSE Scale for South African Grade 12 students as measures of career maturity and CDMSE respectively. The current study draws on high school subjects and therefore addresses the empirical need for more studies with subjects in this life-stage.

The research evidence is that CDMSE is a dynamic construct which can be enhanced through a career development programme (Betz 2006; Betz & Luzzo, 1996; Luzzo, Funk, & Strange, 1996; Luzzo & Taylor, 1994; Scott & Ciani, 2008).   Reese and Miller (2006) reported an increase in CDMSE through a career development programme that they had designed on a cognitive information processing model.   Other studies have focused on using assessments to increase CDMSE (Maples & Luzzo, 2005; Uffelman, Sublich, Diegelman, Wagner, & Bardash, 2004).

Of interest and question are the specific mechanisms that increase CDMSE. Prideaux and Creed (2001) call for further intervention studies in order to clarify the sources of self-efficacy which more readily lead to changes in CDMSE.  Sullivan and Mahalik (2000) developed a career intervention which was based on the four sources of self-efficacy, that is, mastery experience, vicarious experience, social persuasion, and physiological state.  The study showed an increase in CDMSE.   Betz (2007) states that one of the most useful features of Bandura's theory is the understanding of the sources of self-efficacy and this information can be used to guide the development of interventions.  Scott and Ciani (2008) contend that researchers should examine variables in the context of specific CDMSE-related tasks rather than CDMSE in general. This will be taken into account in designing the intervention.

The CDMSE construct has formed a valuable variable for empirical investigation and has facilitated understanding and knowledge of the nature of career decision-making as well as other constructs related to career behaviour. No studies were found where the relationship between CDMSE and academic motivation was examined in the South African context.

**2.3.2 Outcome expectations.**  The current study was primarily undertaken to assess the impact of a career development programme on the variables CDMSE and academic motivation.  While CDMSE and outcome expectations are two distinct constructs, they also share an important and mutually interacting relationship.  A comprehensive understanding of CDMSE can only occur with an understanding of outcome expectations, which forms the second core, construct of SCCT.  Outcome expectations refer to a person's perceptions about what the results of a particular behaviour will be (Albert & Luzzo, 1999).  "What will happen if I do this and will I like the results?"  In other words, outcome expectations are understood as a person's belief about the probable outcomes of an action.

An examination of outcome expectations can be valuable as they are strong motivators of behaviour, for a person will be more likely to engage in the behaviour if it implies positive outcomes (Betz, 2000). In relation to career choice,

a person is more likely to choose a particular academic course or career path if he/she envisages favourable outcomes.  Indeed, outcome expectations make important contributions to vocational choice.

Outcome expectations are acquired through learning experiences similar to those of self-efficacy, therefore, they are subject to environmental influences and modified through cognitive and experiential counselling.  There are different classes of outcome expectations.  For example, they can be beliefs about extrinsic rewards for tasks such as money; or observations of other people's outcomes; or the anticipation of something related to the social strata like social approval; or something related to the self such as self-satisfaction or pride in oneself for mastering a particular task; or sensitivity to physical cues such as level of emotional arousal during task performance (Lent et al., 2002).

The interrelatedness of the SCCT model and its dynamic nature becomes clear when it is suggested that self-efficacy estimates are related to outcome expectations, in that people's actions are considered dependent upon their self-efficacy beliefs *as well as* their outcome expectations. High self-efficacy expectations are unlikely to lead to behaviour if positive outcomes of the behaviour are not anticipated, for example, even if a person has a strong belief in his/her sporting ability, he/she will not necessarily embark on a career in sport if he/she thinks that there are limited opportunities for employment in this field.  Conversely, a person may believe that the outcome of certain behaviour is valued, but he/she would not engage in the action if he/she believed he/she lacked the capability to undertake the behaviour (Betz, 2008).

Whilst the dual role of self-efficacy and outcome expectations is acknowledged, self-efficacy beliefs are often viewed as a more influential determinant of behaviour than outcome expectations (Lent et al., 1994).  If the quality of the performance guarantees an outcome, self-efficacy beliefs are typically viewed as the primary determinant of behaviour with outcome expectations only partially influencing behaviour.  If the quality of performance is not directly implicated to the outcome, a person's anticipation of the outcomes may have a more dominant influence on behaviour.  The latter is often the case

with career-related behaviours for high school pupils as the link between quality of performance and outcomes is not generally clear.

SCCT contends that people form vocational interests in activities in which they have positive self-efficacy and anticipate positive outcomes. Vocational interests can be defined as patterns of likes, dislikes, and indifferences regarding career-relevant activities and occupations (Hansen, 1984). Interestingly, outcomes with anticipated self-satisfaction are more influential in vocational interest development than other types of outcome expectations. Gushue (2006) asserts that one of the seminal contributions of SCCT has been to interpose the constructs of self-efficacy and outcome expectations between personal identity and the development of vocational interests. It is noted that interests are not viewed as personal inclinations transformed into vocational interests on the condition of positive self-efficacy and positive outcome expectations.

***2.3.2.1 Review of research findings on outcome expectations.*** Whilst there is a substantial body of research examining the role self-efficacy beliefs play in the career development process, far fewer studies have been done on the role of outcome expectations in the career process. Nonetheless, outcome expectations are also an important construct in SCCT and there is empirical support for the role that outcome expectations play in the career decision-making process (Bieschke, Eberz, Bard, & Croteau, 1998; Francois, 1998; Morrow, Gore, & Campbell, 1996). Indeed, multiple studies have provided evidence that outcome expectations may actually be a stronger predictor of occupational intentions than self-efficacy beliefs (Diegeman & Sublich, 2001; Fouad & Smith, 1996; Gore & Leuwerke, 2000). Numerous studies have described the combined role of self-efficacy and outcome expectations in predicting career outcomes (Cunningham, Bruening, Sartore, Sagas, & Fink,, 2005; Gore & Leuwerke, 2000; Smith & Foaud, 1999).

Outcome expectations had typically been assessed as a general measure. Cunningham et al. (2005), however, developed a multifaceted measure of outcome expectations related specifically to satisfaction and power in the field.

This study proved useful in understanding which aspect was more important in predicting outcome expectations.

**2.3.3 Choice goals.** The third core construct of SCCT refers to a person's determination to undertake a particular activity, in essence, "How much do I want to do this?"  Choice goals are conceptualised as the intention to engage in a particular action, for example, complete high school or gain tertiary education. Setting goals helps a person to organise and guide their behaviour as it involves forethought which facilitates the process of self-regulating behaviour and simultaneously increases the likelihood that the desired outcome will be attained. Goals are a means for self-empowerment where personal agency is acknowledged and people are viewed as shapers or active agents of their career development process.  The complex interplay in the formation of goals allows a person the opportunity to become self-directed in CDMSE and ultimately their career development.

The construct of choice goals in SCCT cannot be understood in isolation and therefore needs to be examined in the dynamic mutually interactive process of which it is an integral part.

**2.3.4 Social Cognitive Model.** Lent et al. (1994) developed a social cognitive model highlighting the mechanisms of SCCT's three core constructs, namely, self-efficacy, outcome expectations and goals.  The fundamental proposition of the model is that people may establish career goals based on the possibility of desirable outcomes and their beliefs in their abilities to succeed.  It is viewed as a triadic causal system where there is a complex interplay amongst self-efficacy, outcome expectations and choice goals in the self-regulation of behaviour.

The varying levels of self-efficacy, outcome expectations and goals can cause system variations, for stronger self-efficacy beliefs and more favourable outcome expectations promote more ambitious goals and a more sustained performance. Nevertheless, problems in the configuring of the system can occur through inaccurate evaluation; for example, when self-efficacy is underestimated, people tend to give up more easily, set lower performance goals, suffer from performance anxiety, and avoid challenges, even though they have the

capabilities of meeting the challenges.  Conversely, extensive over-estimates of self-efficacy mobilise people to engage in tasks for which they are unprepared, increasing the possibility of failure and discouragement.  The most beneficial self-efficacy beliefs are those that modestly exceed one's current ability level (Bandura, 1986).  Furthermore, goals that are specific, broken into sub-goals, and with a close time-frame between conversions from setting to action, are more powerful than vague, distal, or global goals (Locke & Latham, 1990).

It is necessary to cultivate choice goals as it helps a person organise, guide and sustain his/her behaviour, even over an extended period of time if necessary.   The choice process has three stages, firstly, the expression of the primary goal; secondly, the action; and thirdly, the subsequent performance where attainments achieved from the activities, for example, trophies, grade or self-satisfaction, form a feedback loop which helps to revise and solidify self-efficacy beliefs, outcome expectations, and vocational interests (Lent et al., 2002). It is a process which occurs throughout a person's life.

The construct of vocational interest was also incorporated into the social cognitive model. The combination of self-efficacy beliefs and outcome expectations has a direct effect on the formation of career interests which in turn lead to goals and ultimately to career development.  If people believe they have the ability to perform the tasks for a particular job and they believe there will be positive outcomes associated with obtaining the job, they will be more likely to have an interest in that particular career field (Cunningham et al., 2005). Conversely, when a person has a weak self-efficacy coupled to an anticipation of negative outcomes with regard to a field or activity, vocational interests will fail to develop.   Furthermore, SCCT contends that the combination of self-efficacy beliefs, outcome expectations, as well as emerging interests, influence the formation of goals thereby furthering a person's involvement in that activity. Career interests can be translated into career choice goals and eventual career-related behaviour.   For example, if a student believes he/she is able to master skills required in the engineering field and he/she expects positive outcomes from entering into the field, an interest in the engineering field will be developed.

Interest in the engineering field, in turn, will cause the person to explore more about the occupational field and possibly choose to enter the field.   The implication is that goals form a crucial link between vocational interests and actions. Cunningham et al. (2005) highlight a distinction between vocational interests and choice goals, that is, a student may be interested in the engineering field, but not enter into the field (goal choice).
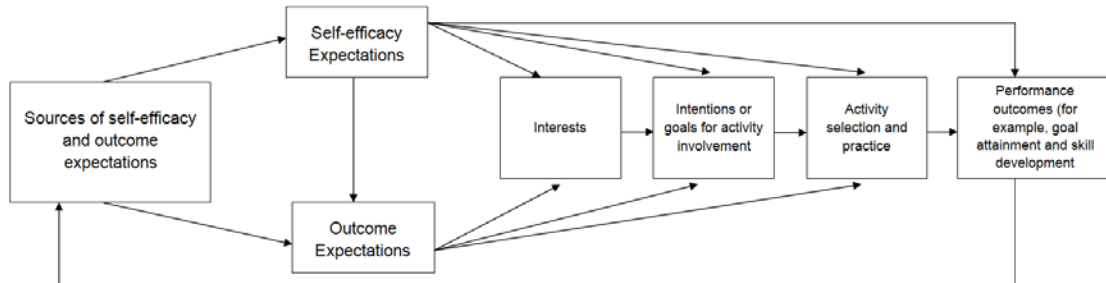


*Figure 2.1:* Model of how vocational interests develop.  Source:  Lent, Brown and Hackett (2002)

**2.3.4.1 Empirical evidence of the Social Cognitive Model.** Fouad and Smith (1996) reported finding a strong relationship between self-efficacy and interest which in turn related to choice goals, and thus endorsing the social cognitive model.   Nevertheless, Smith and Fouad (1999) argued that previous studies have worked almost exclusively on the math/science domain and questioned the generalisability of the social cognitive model.  They examined the subject-matter domain specificity of the constructs included in the social-cognitive career model. Whilst they found that the constructs of self-efficacy, outcome expectancies, interests, and goals are distinct, they found little evidence of generalising across subject-matter areas.

Through the means of a meta-analysis, Lent et al. (1994) noted that self-efficacy and outcome expectations correlated with occupational interests. Further studies revealed that interests, self-efficacy, and outcome expectations all relate to measure of choice-content goals (Lent et al., 2002).  Figure 2.2 gives a graphic representation of SCCT's main constructs.
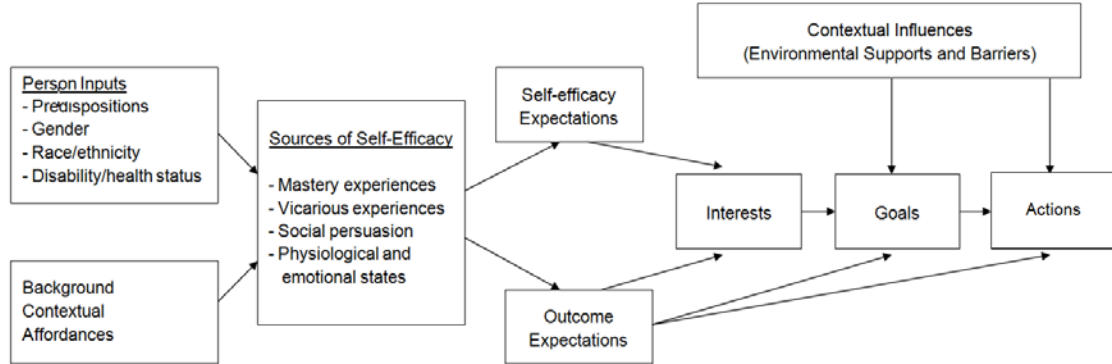
*Figure 2.2*. Theoretical diagram of the key constructs and processes in SCCT. Source: Lent, Hackett and Brown (1999)

**2.3.5 Influence of contextual and personal factors.** The interplay of variables and mechanisms described in the social cognitive model does not occur in a vacuum as social cognitive and contextual factors directly influence the development of career interests, goals, and actions.  The role that environmental and personal variables play in shaping behaviour cannot be negated; indeed, SCCT is concerned with internal and external factors that enhance or restrict personal agency and impact on career behaviour.  Consistent with Bandura's (1977) Social Cognitive theory, SCCT advocated the concept of triadic reciprocity which refers to the mutual interacting influence between three sets of factors, personal factors (cognitive and affective states; and biological attributes); the external environmental factors; and overt behaviour.  Triadic reciprocity is viewed as the interlocking mechanisms of these three factors that affect each other bi-directionally.   The environmental influences, the domain-specific nature of behaviour, and aspects of the person including personal agency, and their impact on the career decision-making process is acknowledged.

People often have to make career choices within the constraints of environmental and personal factors, for example, financial need, educational limitations, gender and ethnic discrimination, or lack of familial support. Some environmental aspects can affect the development of people's self-efficacy

and/or their outcome expectations, for example, girls are more likely to develop self-efficacy for female-type activities and to feel less capable with regard to male-dominated career activities. Contextual factors may play a direct role on career choice formation and implementation; for example, people living in poverty might simply not have developed certain career interests because they did not have the opportunities which would have enhanced an efficacious belief about their abilities in a particular field or allow them to be optimistic about the outcomes.   These factors can inhibit the pursuit of vocational interests or preferred career goals.  People who have optimum environmental conditions are viewed as more able and willing to transform their vocational interests into goals and their goals into actions as opposed to the people who have environmental barriers which result in career choice goals being restricted and vocational interests compromised. Clearly, people may base their career decisions on factors other than vocational interests; for example, a person from an ethnic minority group, with high levels of career self-efficacy, high outcome expectations, and vocational interests which are aligned to expectations, may avoid embarking on a career if he/she *perceives* limited opportunities in a particular career field. Supports and career barriers influence self-efficacy estimates and the translation of interests into choice goals and goals into actions. In other words, the presence of environmental support and the absence of perceived barriers would ultimately enhance career development.   Research confirms the impact familial and social influences have on vocational interests, choice goals and behaviours, through environmental supports and career barriers which a person perceives in relation to choices available (Ferry, Fouad, & Smith, 2000; Lent et al., 2001; McWhirter, Torres, & Rasheed, 1998).

Coping efficacy refers to the degree that the person has the confidence in his/her ability to manage or deal with career barriers. Research has indicated that coping efficacy may influence whether people will try and overcome perceived barriers to career choice (Albert & Luzzo, 1999).  This has important implications for the development of the intervention programme as what needs to be addressed is increasing pupils' ways of coping with self-efficacy as well as

helping them negotiate career barriers and to distinguish between barriers which can be overcome and those which cannot.  Additionally, pupils can be taught skills whereby they are able to organize support for their career choices.

The question then arises as to the accuracy of these appraisals or perceptions of environmental and contextual factors.  Lent et al. (1994, 1996) contended that the effect of contextual factors on people's career choices is often dependent on their personal appraisal of the contextual factors. Essentially, SCCT proposes that cognitive appraisal processes guide behaviour through a combination of objective and perceived environmental factors; for example, the objective factor of poor quality of education can realistically affect people's career development, but their appraisal and response to their low standard of education can influence the ultimate outcome of poor education on their career development.  SCCT postulates that people are the products and producers of their environments and cognitive processes regulate their choices (Buthelezi et al., 2009).  The notion of personal agency asserts itself again as people are active agents in their career development, that is, they can shape their environment, just as the environment can shape them.  A person's perception of career barriers, that is, even barriers with no basis in reality, can have a direct impact on CDMSE.

SCCT was originally designed to enhance the understanding of career development of a wide range of people encompassing diversity in race-ethnicity, culture, gender, socioeconomic status, age and disability (Lent et al., 2002).  As already noted, research bears testimony to a plethora of studies where the three core constructs of SCCT are examined in relation to numerous cognitive and socio-cultural variables.  It appears, however, that the relationship between CDMSE and academic motivation has not received much research attention. This study examines that relationship and the impact a career intervention programme has on the two constructs.

## 2.4 Academic motivation

The second variable under examination in this study is academic motivation.  Motivation literature is comprised of a myriad of constructs which have their own set of defining characteristics, empirical findings, and theoretical distinctions which are not always clear (Graham & Weiner, 1996).  Academic motivation can be conceptualised as a student's energy and drive to learn, work effectively, and achieve to his/her potential at school; it includes the behaviours that follow from this energy and drive (Martin, 2001).

Pre-1980s there were distinct lines of research in the field of cognition and motivation.  Post 1980s, success in learning was no longer attributed purely to natural intellect, but a set of psychological forces that drove a person to achieve success was acknowledged (Hegarty, 2010). In addition, it was realised that students with a high intellect did not necessarily realise their academic potential. Psychologists have spent considerable effort trying to construct theories of motivation, particularly in the academic context and have acknowledged that motivational and cognitive factors are not distinct, separate constructs, but interact and jointly influence student learning and achievement. The shift aligned with the broader change in motivational theories, that is, from traditional motivation models to social cognitive models of motivation.

Academic motivation is a multifaceted construct in that it has a reciprocal relation with beliefs, expectations, learning and achievement (Pintrich, 2003). Academic motivation can vary depending on the situation or context and students can be motivated in numerous ways. In the social cognitive models of motivation, contextual and personality factors are not viewed as the only influences on motivation, but the person's thoughts about her/his motivation and learning also play a key role.

**2.4.1 Self-efficacy theory.** Self-efficacy expectations, as proposed by Bandura (1977) in self-efficacy theory, is applied to motivational behaviour. As already elucidated, self-efficacy theory refers to a person's belief about his/her ability to perform a specific task and is correlated with achievement-related behaviours. The self-efficacy construct is distinct from self-concept as self-efficacy focuses

more on ability within a specific context and is based on actual accomplishments and successes and failures, whereas self-concept focuses on perceptions of global ability.

A fair amount of research has examined how self-efficacy relates to behaviour in the academic context (Bandura, 1977; Eccles, Wigfield, & Schiefele, 1998; Pintrich, 2000; Pintrich & De Groot, 1990; Schunk, 1989, 1991).  Learners who are not confident or perceive themselves incapable may avoid academic tasks that are seen as challenging or difficult, while those who are highly efficacious will be more willing to face challenging academic problems, choose to take more difficult subjects, and invest higher levels of effort and persistence into their academic endeavours. In essence, research has evidenced a positive relationship between self-efficacy and academically-related behaviours such as choice, persistence, cognitive engagement, use of self-regulatory strategies, and actual academic achievement (Linnenbrink & Pintrich, 2002).  Moreover, these findings seem stable across different ages, grades, gender and ethnic groups.

While students should be encouraged to have optimistic beliefs about their efficacy to accomplish their school work, accurate self-efficacy beliefs are important.  Over-estimation or under-estimation of academic self-efficacy is counter-productive to developing academic motivation and can result in students needlessly avoiding academic challenges or encountering failure through embarking on projects or tasks that are outside of their academic abilities.

Of relevance and concern with regard to the current study is the vast number of South African school-leavers who have not achieved the minimum required standard to pass Grade 12 and whose educational experience has left them with significantly low levels of self-efficacy in various academic domains.  In addition, they have frequently not been guided and assisted to take Grade 12 academic programmes that align with and suit their profile and which would have given them opportunities to succeed on tasks within their range of competence. In all likelihood this could have led to them developing new capabilities and skills which could have ultimately strengthened their academic self-efficacy and, therefore, increased their chance at academic and career success.   Self-efficacy

clearly forms an important component of academic motivation and the current study's intervention programme would, therefore, need to address enhancing career decision-making self-efficacy *and* academic self-efficacy, which plays a central role in academic motivation.

**2.4.2 Attribution theory.** Attribution theory focuses on people's attempts to understand why events occur. In essence, attributions are a person's perceptions of the causes of successful and unsuccessful events.

Research has linked the influence of a student's attributions to behaviours and success in academic settings which, in turn, has facilitated an understanding of how attributions relate to academic motivation and learning in school (Borkowski, Weyhing, & Carr, 1988; Weiner, 1985).  Attribution theory proposes that a person's evaluation of the cause of the outcome of his/her performance will have an impact on his/her motivation and, therefore, behaviour.  So when a learner passes a test (the outcome), an emotional reaction will typically follow, which is then followed by an explanation (an attribution).

The perceived causes are categorised into three dimensions:  locus of causality which refers to the cause being internal (personal factors like ability) or external factors (environmental factors like disruptive testing venue); stability of perceived cause; and controllability, which is, questioning whether, the perceived cause can be controlled.  Adaptive and accurate attributions are associated with higher expectancies for success, enhanced academic self-efficacy, and positive affect like pride or hopefulness.  These psychological outcomes are associated with persistence, choice, positive self-efficacy, and academic achievement (Linnenbrink & Pintrich, 2002).

In the case of an event which was perceived as successful, such as passing a test, adaptive attributions could be ascribed to stable, internal factors as these factors are present for future use: *I passed my test due to my good ability*.  Alternatively, adaptive attributions could be ascribed to unstable, but controllable internal factors which are modifiable:  *I passed my test due to effort.*

In the case of an event which was viewed as a failure, adaptive attributions could be ascribed to unstable, controllable and internal causes as

they allow for possibility of success in the future: *I failed my test due to lack of effort*. Alternatively, adaptive attributions could be ascribed to unstable, uncontrollable, external factors as they allow for possible future success because the circumstances may not be there in the future: *I failed my test due to teacher bias.*

It can be inferred that fostering the use of adaptive attributions will facilitate the process of enhancing academic motivation.

**2.4.3 Achievement goal theory.**  Achievement goal theory is considered to be one of the most central theories in current motivation research (Linnenbrink & Pintrich, 2002).  Achievement goal theory posits that students' academic motivation can be understood as attempts to achieve goals. Seifert (2004) posits that research has shown that perceptions of competence and control are predictive of learning goals and performance goals.  Goal setting is hypothesised to be an important cognitive process affecting motivation (Schunk, 1991).

Empirical studies suggest there are two types of learning goals: performance and mastery (Ames, 1992; Dweck & Leggett, 1988; Elliot, 1997; Elliot & Church, 1997; Elliot & Harachiewicz, 1996; Harachiewicz, Barron, & Elliot, 1998; Maehr & Midgley, 1996; Nicholls, 1984).  Performance goals induce students to base their personal ability and self-worth beliefs on a comparison between their performance and that of others. Maladaptive outcomes can result from this type of learning goal and, sadly, it is often emphasised in educational contexts.  Mastery goals may lead students to base their ability beliefs on increased understanding, mastery of concepts or improved performance relative to prior understanding, mastery, or performance.  These goals are considered to foster adaptive motivational, cognitive, and achievement outcomes. As has already been mentioned, goals that incorporate specific performance standards raise efficacy and motivation more than general goals.

Research on goal-setting has focused primarily on examining short-term period effects.  Schunk (1991) contends that while this type of research can study basic processes, it cannot fully capture the nature of academic motivation as academic goals are often long term, for example, attain a degree at university.

Although research over a long term seems preferable, it is beyond the scope of the present study which aimed at examining the impact of a career development programme on academic motivation.

Despite the aforementioned, it is intended that the career development programme will elucidate the specific academic goals the adolescent needs in order to meet career goals. A lack of academic goals can make schoolwork seem meaningless as certain students may be work avoidant if they feel capable of doing the work but see no reason for doing it (Seifert, 2004).  They find little challenge, stimulation, satisfaction or meaning in the work they do and, consequently, only do the minimum amount of work that is required.

**2.4.4 Self-worth theory of motivation.**  The self-worth theory of motivation explains the motivation of students as an attempt to maintain or enhance self-worth (Seifert, 2004).  According to Covington (1984), there is a belief in western culture that self-worth is inherently connected to performance and achievement. The student is motivated by a desire to protect ability perceptions by proving oneself or alternatively avoiding appearances of incompetence which would result in failure-avoidant behaviour.  Students use defence mechanisms to protect their self-worth by effort withdrawal, procrastination, or maintaining a state of disorganisation (Seifert, 2004).  These behaviours are counter to the pro-active stance required for academic achievement and, indeed, for effective career decision-making.

**2.4.5 Self-determination theory.** Self-determination theory introduces the notion of three different types of motivation which vary according to the underlying attitudes or goals that give rise to action (Jung, 2013).  The three different kinds of motivation, that is, intrinsic, extrinsic or amotivation, are conceptualised on a continuum.

Intrinsic motivation is viewed as the most self-determined type of motivation in which behaviours are performed for the individual's sake.  When people are intrinsically motivated, they engage in activities for interest and enjoyment. Self-determination theory highlights the psychological need for

autonomy and views intrinsic motivation as reflecting the prototype of self-determination.

Intrinsic motivation can vary in type, for example, personal interest and situational interest are relevant types in the academic context.  Intrinsic motivation of personal interest type reflects a person's level of interest in a specific domain such as mathematics and is fairly stable over time.  Intrinsic motivation of situational interest type relates to the specific learning context such as writing a paper about career decision-making processes.  Mitchell (1993) suggested that situational interest could be divided into two further categories: catch and hold.  'Catch' refers to factors that catch the students' attention and 'hold' refers to making the material meaningful.  The latter type of motivation tends to last for a shorter period of time.  Interest is understood as a multi-dimensional construct and not a single entity.  Supportive social environments can foster intrinsic motivation (Muller & Louw, 2004).

Extrinsically motivated behaviour is typically undertaken to achieve a goal or reward beyond the activity itself. Rewards can include a range of factors, for example, money, marks, or prestige.  According to Deci and Ryan (1985), however, there are forms of extrinsic motivation that can be self-determined.

Amotivation refers to the absence of motivation and can be defined as a state in which individuals cannot perceive a relationship between their behaviour and the consequences of the behaviour.  Amotivation has been associated with a range of behaviours which are counter-productive to school progress, for example, boredom, poor concentration, and even school-dropout.  Amotivation typically occurs in students who do not value the activity or when they believe they cannot achieve a desirable result.

Figure 2.3 shows the further distinctions of subtypes of extrinsic motivation and intrinsic motivation on the continuum (Deci & Ryan, 1985).

| Type of motivation | Amotivation | | Extrinsic Motivation | | | | Intrinsic Motivation |
|---|---|---|---|---|---|---|---|
| Type of regulation | Non-regulation | | External regulation | Introjected regulation | Identified regulation | Integrated regulation | Intrinsic regulation |
| Quality of behaviour | | | | | | | |
| | Control | | | | | | Self-determination |
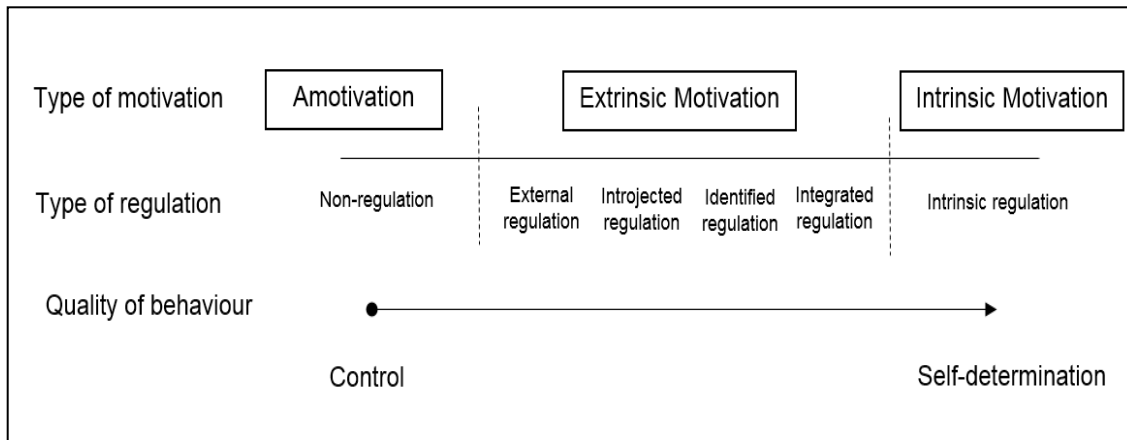
*Figure 2.3:* Self-determination Theory continuum of motivation. Source: Deci and Ryan (1985)

Deci, Vallerand, Pelletier and Ryan (1991) went beyond the extrinsic-intrinsic motivation dichotomy and developed the concept of internalisation. They argued that not all students are intrinsically motivated for all tasks or subjects, but motivation can be increased through the process of internalisation whereby the student adopts a value for learning and ownership of the learning process. It is a proactive process whereby people transform regulation from external contingencies into regulation by internal processes. Internalisation is promoted through three innate needs, namely, autonomy, competence, and relatedness. With regard to autonomy, self-determination theory highlights the psychological need for autonomy and posits that when behaviour is self-determined, the regulatory process is choice as opposed to controlled behaviour whereby the regulatory process is compliance (Maurer, Allen, Gatch, Shankar, & Sturges, 2012). With reference to competence, one of the concerns of the self-determination theory is to promote within learners a confidence in their own capacities and attributes. Relatedness refers to developing secure and satisfying relationships with others.

Internalisation or self-regulation is a complex, multifaceted process that integrates key motivational variables and self-processes (Clearly & Zimmerman, 2004). Self-regulated learners are proactive learners who incorporate self-regulated behaviour such as time-management, organizational strategies, and self-motivational beliefs such as self-efficacy and intrinsic interest to achieve self-

set goals. There is a large body of research which indicates self-regulated learners display high levels of motivation and achievement (Schunk, 1996). Research indicates that pupils who have a more self-determined form of motivation for doing schoolwork are more likely to stay in school than pupils who have less self-determined motivation (Deci, Vallerand, Pelletier, & Ryan, 1991).

The Academic Motivation Scale (AMS) operationalises the construct of academic motivation by measuring degrees of self-determined motivation in academic contexts (Vallerand et al., 1992).   The AMS will be used in this study to evaluate the impact of the career development intervention on the construct of academic motivation.

**2.4.6 Academic motivation and contextual factors.**  Research has sought to explore the cross-cultural differences in academic motivation; for example, Komarraju, Karau and Ramayah (2007) conducted an interesting investigation into the cross-cultural differences in academic motivation.  Malaysian students scored significantly higher than U.S. students on the following motives:  thinking, competing, desire for self-improvement, facilitating and debilitating anxiety, as well as disliking and feeling discouraged about school.  U.S. students scored higher than Malaysian students on the demanding motive.  It seems that family dynamics, selection processes and perceptions of the relative importance of effort and ability may all play a role in creating these cultural differences in academic motivation.  South African researchers conducting research in a multi-cultural South African society need to constantly take cognisance of possible cultural factors and differences at play.

Martin (2005) examined the relationship between academic motivation and gender and concluded that while girls have higher levels of motivation than boys on a number of dimensions, there was no marked qualitative difference between the two genders.  This has implications for intervention studies aimed at enhancing or sustaining academic motivation.

 **2.4.7 Academic motivation and a career development programme.**  While there has been a great deal of research on academic motivation, it has often been conducted in lab-like intervention contexts and based on correlational

design (Linnenbrink & Pintrich, 2002). Intervention studies where the development of adaptive motivational beliefs such as increased self-efficacy; attributions to internal, controllable factors; interest in academic tasks; and mastery-goal orientations are promoted, is preferable. Sutherland, Levine, and Barth (2005) investigated the impact of an informal career education programme, Career Trek, on academic motivation and self-esteem with 'at-risk' students. The programme contributed positively to the learners' perceptions of their own abilities, self-esteem and school motivation.

Martin (2005) assessed a youth enrichment programme on academic motivation as effective. He identified five facets of the programme that contributed to its effectiveness: first, the optimistic expectations held by adults; second, the programme's focus on mastery; third, the climate of cooperation and the ensuing sense of belonging; fourth, the positive relationships that developed amongst students and between students and adults, and fifth, embedding school-related elements within a broader enrichment programme. It is interesting to note that broad-based enrichment programmes, that are not specific to academic motivation, seem to impact positively on students' academic motivation. These programmes help young people feel valued; develop supportive relationships; establish productive places for the individual in a group; and directly foster individuals' usefulness to others. Commensurate with this information, the present study's career development programme sought to meaningfully embed these factors into the entire programme, so academic motivation was not specifically inherent in the programme, but quite consistent with it.

It seems clear that self-perceptions of competence, a sense of agency and autonomy, adaptive attributions, and goal setting are central to understanding and enhancing academic motivation. In order to enhance academic motivation it would be crucial for the career development programme to instil in the learners a sense of belief in themselves and their ability to surmount the academic difficulties they will encounter. In promoting academic motivation through an intervention programme it would be helpful to create an awareness of adaptive attributions as opposed to maladaptive attributions and, moreover, help students

develop the skills required for making adaptive attributions. Of significant importance is fostering the notion of autonomy and encouraging students to take ownership of their academic pursuits and career decisions.  Pupils need to be helped to set career goals and taught to see the link between career choices and required academic performance.  As students begin to connect their academic accomplishments with the expectations of the world of work, they are more likely to understand the significance of remaining in school and may make more prudent decisions concerning their short- and long-term futures (Legum & Hoare, 2004). Indeed, career competencies positively contribute to learning motivation (Meijers, Kuijpers, & Gundy, 2013).

Self-efficacy seems to be a central factor in enhancing CDSME and academic motivation.  The question that begs investigation is whether learners with CDMSE would understand and accept the value of education and find meaning in schoolwork more than a student with lower CDMSE.

## 2.5 Socio-economic status (SES)

SCCT career theorists are cognisant of the fact that career development is not only examinable and understandable from a cognitive perspective, but rather that cognitions about self and the world of work combine with SES to influence the career decision-making process (Chartrand & Rose, 1996; Wilgosh & Mueller, 1993). The influence of SES on adolescents is viewed as important as the career development programme (Ali, McWhirter, & Chronister, 2005; Gibson & Mitchell, 1981; Herr & Cramer, 1996). This has significant implications in a country like South Africa where 45% to 55% of the population are defined as poor (McGrath & Akagee, 2007). Inadequate career counselling tends to reinforce the low social and economic position of poor and marginalised people in South Africa and very few disadvantaged students ever receive adequate career counselling at school (Maree, 2012).  The current study thus sought to examine the impact of a career development programme on CDSME and academic motivation of Grade 11 learners from diverse socio-economic backgrounds.

Simply defined, SES is a measure of an individual's or family's economic and social position based on education, income and occupation. Research has found that SES can have an impact on career-related issues like career maturity (Watson, 1984), occupational aspirations (Rojewski & Kim, 2003; Schulenberg, Vondracek, & Crouter, 1984; Wahl & Blackhurst, 2000), career values (Rojewski, 1994), and career interests, goals, and choices (Fouad & Brown, 2000).

Research has highlighted a trend that many high school learners from low socio-economic families believe they could not or did not need to pursue further education as opposed to learners from high socio-economic backgrounds who typically plan to enter the world-of-work after acquiring tertiary education (Arulmani, Van Laar, & Easton, 2003). These beliefs tend to predispose learners from low socio-economic backgrounds to entering the world-of-work after school, often as unskilled labourers.

Stead, Els and Fouad (2004) undertook a study to investigate perceived career barriers among South African high school learners and argue that SES can potentially be a perceived barrier in the career choice process of individuals. They found SES to be a confounding variable and encourage South African researchers to control for SES when examining South African adolescents' career development and career barriers.

For the purposes of this study, SES was grouped according to school populations.  The sample of this study was Grade 11 learners who came from three different schools with diverse socio-economic statuses.  It is significant to highlight that SES may influence the nature of schooling received (Roberts, 2005); indeed, the nature of educational inequality in South Africa reflects the overall nature of income inequality.  Furthermore, research has indicated that social composition can amplify the effects of SES in school settings, as a school with a high concentration of learners from low socio-economic backgrounds is often characterised by anti-school sentiment and disruptive behaviour whereas a school with an integration of learners from different socio-economic backgrounds is more conducive to achievement (Taylor & Yu, 2009).  Indeed, the social

composition of schools is a more important determinant of educational achievement than school spending (Kahlenberg, 2006).

Schools with mostly learners from low socio-economic families generally suffer from resource shortages. Despite progress made towards greater equity on South African educational spending since 1994, there is still infrastructural and resource shortages.  For example, wealthier schools are able to employ psychologists to fulfil the function of career education and counselling.  There is, however, an increasing realisation among economists of education, as well as policy-makers, that increased spending on poor schools is not always translating into improved educational outcomes (Taylor & Yu, 2009).  This could be indicative of internal efficiency problems such as learner and teacher absenteeism or limited parental involvement.  Parental involvement improves the accountability of the school management and education provided. While research shows that SES affects a range of career-related issues (Fouad & Brown, 2000), it is the learner from the low socio-economic family who would stand to benefit the most from an effective career education programme offered in the schools.

## 2.6 Hypotheses

In light of the above analysis, three broad hypotheses were developed as primary objectives of the study.  The first hypothesis proposes that the career decision-making self-efficacy of Grade 11 learners from diverse socio-economic backgrounds would be meaningfully enhanced by participation in a career development programme. The second hypothesis asserts that the career development programme would enhance the academic motivation of Grade 11 learners from diverse socio-economic backgrounds.  The third hypothesis states that the career development programme would significantly strengthen the relationship between career decision-making self-efficacy and academic motivation of Grade 11 learners.

The independent variable in the study was the career development programme as the intervention and SES with career decision-making self-efficacy and academic motivation as the dependent variables.

## 2.7 Chapter summary

In this chapter, an examination of the current trends in South African career guidance and education revealed that despite certain initiatives which give some attention to the career needs of South African high school learners, alarming disparities persist.  While more affluent schools are able to afford to buy in psychologists to provide career guidance and counselling, many public schools are reliant on their life orientation teachers who are oftentimes unqualified to provide these important services.  Nevertheless, the school setting remains the important source for exposing young South Africans to career education and development. It seems that there is a dismal shortfall of service in this domain with a crevasse between other educational priorities, school logistics, and policy-makers.  The utility of a career development programme that is empirically robust and adaptable for different contexts was proposed.  Thus, the essence of this study is to develop and evaluate a school career development programme, within a sound theoretical framework, which can facilitate the career development of South African Grade 11 learners.  The chapter discussed the rationale for using the SCCT as the theoretical framework for the intervention, as well as the principles and concepts of the theory and the substantial empirical evidence that gives it support.

Additionally, the rationale for investigating the relationships between career decision-making self-efficacy and academic motivation was presented. Numerous theories on motivation complement SCCT and a discussion of these theories was undertaken.  To date, there seems to be no South African research that explores the impact of a career intervention programme on academic motivation.

Finally, the contextual issue of SES is highly relevant in South Africa and is considered in relation to career education and development. The chapter concluded with the presentation of the primary hypotheses of the study.

Chapter three will present the design and structure of the career intervention programme.

*CHAPTER 3*

**DESIGN OF CAREER INTERVENTION PROGRAMME**

*"There are costs and risks to a programme of action, but they are far less than the long range risks and costs of comfortable inaction."*

John F. Kennedy

**3.1 Introduction**

There are numerous definitions to encapsulate the concept of career interventions.  Spokane and Oliver's (1983) definition, however, is one of the most commonly used.  They define a career intervention as 'any treatment or effort intended to enhance an individual's career development or to enable the person to make better career-related decisions' (p. 100).  Career interventions, therefore, can encompass a broad range of activities which can include individual or group career counselling, career training classes and workshops. In this study a career development course, specifically designed for this study, will be used to prepare Grade 11 learners with skills, perceptions and knowledge necessary for making their first career decision, be it choice of work, vocational training or university course.  The career intervention is entitled:  "The Game Plan:  You can be the captain of your team" to emphasise the self-efficacy theme.

The design phase of an appropriate and useful programme involves the planned and systematic administration of scientific, technological, theoretical, and practical knowledge (Thomas & Rothman, 1994). Reese and Miller (2010) warn against the gap formed between the proliferation of career services and the number of outcome studies on career courses.  Indeed, they argue for better collaboration between researchers and practitioners whereby empirically supported techniques and career theories are incorporated into a career programme curriculum in order to increase the effectiveness of these courses.  A literature search revealed a number of South African studies whereby the impact of a career programme was undertaken (Du Toit, 2010; Herr, 2002; Janse, 1983; Mbetse, 2002; Mouton, 1997; Quinn, 1992; Saaiman, 1993; Stead, 2005; Todes,

1999; Van Tonder, 2006). These studies examined the impact of career development programmes on constructs other than CDMSE and academic motivation.

For the present intervention programme, it was necessary, firstly, to establish design goals and apply these objectives to well-established theories and research, and, secondly, to formulate a curriculum according to the particular requirements of the theoretical framework whilst, for the researcher who is a qualified counselling psychologist, utilising knowledge and practical experience gained from working in the career counselling field for nineteen years.

## 3.2 Design goals of career intervention

The primary goal was to design a career development programme based on sound theoretical principles whereby the CDMSE and academic motivation of Grade 11 learners, across the socio-economic spectrum, could be enhanced.

Self-efficacy theory (Bandura, 1977) hypothesises that self-efficacy motivates people to persist and complete tasks, that is, increase motivation.  A further purpose of the study was to investigate the impact of the career development programme on the relationship between the learners' academic motivation and their CDMSE.

A discussion of theoretical considerations required for developing and fostering the primary constructs, CDMSE and academic motivation, through the career intervention will follow.

## 3.3 Developing CDMSE through a career intervention

SCCT provides a useful framework for the design and implementation of a group intervention (Barnard, Deyzel, Adams, Fouche, & Kruger, 2008). More specifically, the theory's constructs are easily measurable and contextual and personal factors can be taken into cognizance.  The construct, self-efficacy, forms an integral part of SCCT and can be useful in understanding and predicting certain behaviour.  SCCT contends that the degree of self-efficacy which a person holds for a particular domain or process can cause them to avoid or

attempt behaviours, invest effort in a task as well as affect the length of time the behaviour will be sustained even when presented with challenges (Betz, 2006). This is valuable information for designing an intervention where a primary objective is to increase self-efficacy. The construct, CDMSE, is a specific type of self-efficacy that refers to a person's belief that they are able to successfully complete tasks which are related to career decision-making.

Research has shown that CDMSE is a dynamic construct that may be increased by interventions (Betz, 2006; Luzzo, Funk, & Strange, 2006). Furthermore, studies have indicated that strong CDMSE increases the likelihood of the person engaging in exploratory behaviours (Gushue et al., 2006). The intervention designed for the current study aimed to enhance learners' CDMSE, that is, their beliefs about their capacity to engage in career exploration tasks and make career decisions.

The body of SCCT research has offered numerous design procedures (Betz, 2006; Lent, Hackett, & Brown, 1999; Scott & Ciani, 2008) and initiatives whereby CDMSE can be boosted (Dillinger & Landrum, 2002; Landrum & Mulcock, 2007; Prehar & Ignelzi, 2012; Reese & Miller, 2006; Thomas & Mc Daniel, 2004). Scott and Ciani (2008) identified the following five behaviours which form the five subscales of the CDMSE-SF instrument used in this study:

- *Self-efficacy for self-appraisal* includes making an accurate assessment of one's career interests, abilities, skills, and values.
- *Self-efficacy for gathering occupational information* involves the ability to describe an occupation of interest as well as researching additional information about one's chosen career field or about the job market in general.
- *Self-efficacy for goal selection* focuses on the ability to identify a career goal that complements the person's values, interests and skills.
- *Self-efficacy for planning* describes tasks that prepare a person for the job market and job application process in the particular field.
- *Self-efficacy for problem solving* includes a person's resilience when challenged with occupational barriers.

Quantitative evaluation, including pre- and post-test measurements, should therefore reflect the following distinguishable competencies: an increased confidence in self-knowledge related to factors such as vocational interests and personal skills; an increased self-efficacy in career knowledge; improved self-efficacy in the skills required for setting goals whereby self-knowledge is integrated with career-knowledge; improved self-efficacy in vocational planning skills and self-efficacy for coping with career barriers.  Effective skills form the antecedent to effective behaviours which will implement positive changes.

Six interrelated and ongoing processes that ideally begin in the life of a primary school learner and are refined in high school have been identified (Lent, Hackett, & Brown, 1999). They are: an acquisition of positive yet realistic self-efficacy and outcome expectations; the development of vocational interests; the formation of links between interests and career-related goals; the translation of goals into actions; the development of academic and work skills and remediation of performance-related problems and the negotiation of social supports and barriers that affect the development of self and occupational beliefs and the pursuits of preferred academic/career options. It cannot be assumed that these processes naturally occur as learners typically do not live in an ideal world. Whilst these processes form clear targets for an intervention programme, they also correlate with the five subscales of the CDMSE-SF.  The five behaviours and the above developmental processes are consistent with one of the primary goals of the study, that is, to enhance CDMSE through a career development programme, and were used to guide the design of the intervention (Betz, 2006).

Consistent with these behaviours and processes, studies have shown that students' CDMSE is developed through career intervention programmes by increasing their knowledge of careers, course options, and curriculum requirements, as well as teaching them the skills required to access the occupational information, set career goals, plan their careers and develop vocational identities (Dillinger & Landrum, 2002; Landrum & Mulcock, 2007; Prehar & Ignelzi, 2012; Reese & Miller, 2006; Thomas & Mc Daniel, 2004).

As discussed in the literature review of chapter two, SCCT identifies four information sources which promote self-efficacy, namely, mastery experience, vicarious experience, social persuasion, and physiological state.  Betz (2006) asserts that successful career interventions are those that are based on these sources of self-efficacy:

*Personal mastery:* Personal performance accomplishments are assumed to provide a powerful source of perceived self-efficacy, therefore, interventions intending to enhance self-efficacy might emphasise personal performance experiences that build a learner's mastery.  Self-efficacy can be enhanced through reflecting on past achievements and personal strengths in a manner that promotes rather than discounts perceived competence. People need to be able to attribute their performance successes to their own abilities, in other words, perceived reasons for task success are ascribed to internal, stable facts like personal ability as opposed to effort or luck. Lent et al. (2002) note two points of caution, firstly, mastery experiences alone may not instil robust self-efficacy beliefs and, secondly, it is only helpful to foster personal mastery in domains where a learner's efficacy beliefs are below his/her measured ability.  A person with weak efficacy beliefs <u>and</u> deficient skills in a particular domain will in all likelihood not be helped by efforts to raise his/her self-efficacy in the particular domain.  They suggest that the person be encouraged to consider occupational or academic pursuits which are more aligned to his/her current skills.

*Vicarious experience or modelling:* Observation of role models can increase self-efficacy.  Grier-Reed and Nicole (2010) found that vicarious learning through peer presentations in a career intervention enhanced career self-efficacy.  To maximise the effects of modelling on CDMSE, models should be similar to students.

*Verbal persuasion:* Receiving encouragement and support from others has been identified as being important for nurturing self-efficacy and positive career outcomes (Lee & Park, 2012).

*Physiological cues*: SCCT emphasises the importance of attending to physiological and emotional states, such as anxiety or negative affect which

weakens self-efficacy and/or disrupts the person's performance skills. Learners need to be trained to manage physiological and emotional reactions through anxiety-coping strategies and stress management techniques.

Sullivan and Mahalik (2000) found that career interventions informed by these sources of self-efficacy were successful at increasing and sustaining career self-efficacy over a six week period and were, therefore, also used for the design of this study's intervention.

**3.4 Promoting academic motivation through a career intervention**

Another objective of the career programme design was to improve the academic motivation of the Grade 11 learners. This study did not seek to improve academic motivation through specific instructional methods directly related to academic skills, but rather by creating an awareness of the link between academic outcomes and career goals.  Essentially, it was about giving meaning and purpose to school attendance and academic work.  Career development forms an integral part of academic planning (Dykeman et al., 2003).   Martin (2005) contends that targeted components, for example, academic motivation, can be embedded into a programme and still have impact.

As noted in the literature review, self-perceptions of competency, a sense of personal agency and autonomy, adaptive attributions, and goal setting are central to understanding and enhancing academic motivation. On a more pragmatic level, research has shown that the following factors can impact on learners' motivation: the nature of pedagogy (Teven & Mc Croskey, 1997); relationships learners have with their teachers (Kelly & Hansen, 1987); parents' attitudes towards their children as well as their expectations for their children (Dandy & Nettelbeck, 2000); class climate (Qin, Johnson, & Johnson, 1995); influence of peers (Wigfield & Tonks, 2002); school culture and structure (Anderman & Maehr, 1994); socio-demographic status (Becker & Luthar, 2002); gender (Martin, 2002); and age (Martin, 2001).  These findings align with the five strategies Martin (2005) identified that would enhance academic motivation through an intervention programme, namely, the presenter needs to manifest

optimistic expectations, focus on mastery, develop a climate of cooperation coupled to a sense of belonging and feeling valued, develop supportive relationships and foster each person's usefulness to others.

This information draws attention to the importance of the style of presentation of the programme; the significance of the relationship developed between the presenter and the learners; the value of establishing a supportive ethos in the class that is conducive to interactive, open discussion and debate; and helping the learners feel valued.   Moreover, through establishing a cooperative climate and mutual support, a sense of community and belonging develops which, in turn, encourages learner engagement.   Becker and Luthar (2002) confirm that motivation is enhanced through learners' sense of belonging to their school community.   Nevertheless, peer influences on academic motivation need to be monitored as they can have a significant negative effect on students' academic motivation.  If academic achievement is not highly regarded by the peer group, potentially barrier-producing influences can arise and need to be counteracted.

While the presenter plays a crucial role in facilitating the development of academic motivation, the design of the programme is an essential ingredient for achieving the objectives of this study.

## 3.5 Design structure of career intervention

Martin (2005) states that brief interventions which are well timed and well targeted can yield robust effects consistent with the underlying theoretical rationale of a programme.  Meta-analytic findings suggest that in the absence of significant affective problems, like depression and anxiety, most learners would benefit maximally from brief, four-to-five session interventions (Brown & Krane, 2000).  With this guideline in mind, the career intervention for the current study was based on a six-session design.

Flores et al. (2003) propose that students require career interventions which are structured, supportive, intensive, and where there is opportunity for hands-on experience. Indeed, engagement in classroom endeavours can be

increased by tapping into learners' interests (Linnenbrink & Pintrich, 2002). Interest can refer to personal or situational interest. Situational interest can be further understood as two factors, namely, catch and hold. 'Catch' factors capture the students' attention through innovative or novel instructional techniques and 'hold' factors empower learners by making the content meaningful and therefore of use to them. This, in turn, facilitates involvement in the topic or task. Brown and Krane (2000) assert that the following five elements have been identified as a necessary prerequisite for an effective career development programme: firstly, opportunity for reflective writing through the use of workbooks and other materials; secondly, receiving individualised interpretations and feedback on test results, goals, future plans and occupation analyses; thirdly, be given information on the world of work; fourthly, opportunities for vicarious learning experiences by exposing learners to models who have attained success and, fifthly, give attention to building social-environmental support through activities designed to help participants build support for their career choices. It is interesting to note that these five components tend to overlap with Bandura's (1986) four sources of self-efficacy information.

This study's career intervention was designed to capture the situational interest of the learners through exciting and meaningful activities as well as providing a diverse range of activities whereby each phase of the course incorporated lectures, written assignments, two psychometric assessments with individualised feedback, self-exploration, personal reflection, group activities, and class discussion. Each learner received a manual-type workbook which included a number of activities whereby they were able to record their self-discovery, career goals and plans. This also functions as an aid for further reflection and implementation efforts.

The researcher consulted with Professor Naidoo and other professionals to confirm and consolidate the design of the intervention.

**3.6 The intervention programme**

The intervention programme consists of the following five phases: Self-knowledge; World of Work and Further Education; Goals and Decision-Making; Barriers to Career Development and Career Planning.  Table 3.1 provides an overview of the career intervention programme.

**3.6.1 First phase of programme:  Exploration of self-knowledge.**  Bernhardt (1998) suggested that when designing an intervention a researcher must categorise and order the information into the most relevant and important aspects that he/she wishes to impart to the targeted population.  Since self-knowledge is of utmost importance in increasing CDMSE, it was deemed appropriate to begin the programme by focusing on an exploration of self-knowledge.  This is in accordance with SCCT which suggests that career intervention designs need to focus on learners' emerging interests, values, and talents as well as the cognitive bases of these characteristics (Hughes & Karp, 2004).

The first phase of the programme included an exploration of vocational interests, natural preferences, abilities, values and an opportunity to write their life-story.  A consideration and discussion of these components shall follow.

*Interests:* Interest in a career field is a precursor to career success. Gregory (1992) contends that the purpose of interest inventories is to identify a person's vocational and related interests in order to facilitate career choices. There is evidence which indicates that using assessments increases CDMSE (Scott & Ciani, 2008).  Hughes and Karp (2004) reviewed over 50 studies on career interventions and found that self-assessment inventories are related to improved career-selection measures. Indeed, assessment results can confirm the learners self-view, provide new possibilities which facilitate the process of the person gaining a sense of control over the future and working towards making a more informed career choice as well as enhancing CDMSE.

Table 3.1:  *Overview of the career development programme*

| THE GAME PLAN:  YOU CAN BE THE CAPTAIN OF YOUR TEAM | | |
|---|---|---|
| **1. Self Knowledge** | 1.1 My natural orientation to the world of work | |
| | 1.2 My natural preferences | |
| | 1.3 My natural talent | |
| | 1.4 Matters which are important to me | |
| | 1.5 Aspects of my life story | |
| | 1.6 Reflections on my wiring | |
| **2. World of Work and Further Education** | 2.1 Careers fields | 2.1.1 Creative |
| | | 2.1.2 Business |
| | | 2.1.3 Engineering and the built environment |
| | | 2.1.4 Health sciences |
| | | 2.1.5 Natural sciences |
| | | 2.1.6 Social sciences |
| | | 2.1.7 Legal |
| | 2.2 Sources of career information | |
| | 2.3 Structure of higher education and training | 2.3.1 University |
| | | 2.3.2 University of technology |
| | | 2.3.3 FET colleges |
| | | 2.3.4 Private institutions |
| | | 2.3.5 Learnerships and apprenticeships |
| | | 2.3.6 Skills programmes |
| | 2.4  Qualification options | |
| | 2.5  Entry requirements into tertiary education and training | |
| **3. Goals and Decision-Making** | 3.1 Key ingredients to the decision-making process | |
| **4. Barriers to Career Development** | 4.1 Economic factors | |
| | 4.2 Socio-political factors | |
| | 4.3 Academic challenges | |
| **5. Career Planning** | 5.1 Career plan | |
| | 5.2 Employment | |
| | 5.3 Curriculum Vitae | |
| | 5.4 Interviews | |

The Self-Directed Search (SDS) has been standardised for the South African context (Bisschoff, 1987) and was used as an interest inventory. It was viewed as an age-appropriate assessment tool where learners could explore their vocational interests. The SDS was originally developed by Holland (1985), who identified six different types of vocational interests in relation to the world of work, namely, realistic, investigative, artistic, social, enterprising and conventional. People with *realistic* vocational interests enjoy physical activities that involve working and building with their hands, with machinery and mechanical tools, and with plants and animals. They like to see concrete results from their involvement and perceive themselves as physically strong. People with *investigative* vocational interests like science, mathematics and computers. They tend to be interested in studying and enjoy doing activities that involve ideas, thinking, and problem solving. People who have *artistic* interests enjoy engaging in self-expressive activities such as music, dance, acting, design, writing, and entertaining. They perceive themselves as creative, independent, and unconventional. People with *social* vocational interests enjoy helping, teaching, and providing service to others. Typically, they are interested in interacting with people and are good communicators. People with vocational interests in the *enterprising* category are interested in business activities that involve leading, decision-making, persuading, selling, and making money. They are willing to accept the responsibility for making choices that affect others. People with *conventional* vocational interests like structure and are interested in activities such as performing office operations. They are comfortable with following procedures and rules.

The researcher scored and interpreted each assessment and gave individualised written feedback to each learner. Feedback is important because while inventories can help students gather information about themselves, they do not know how to integrate this knowledge into their academic and careers plans. If time limitations and financial constraints could be overcome, the computerised Career Mentor programme would be a very valuable tool to help the learners discover their current vocational interests.

*Natural Preferences:* The concept of natural preferences was explained to the learners and a worksheet was given whereby four orientations were chosen from the following four dichotomies: extroversion versus introversion (preference for source of energy); intuition versus sensing (preference for processing information); thinking versus feeling (preference for decision-making); and judging versus perceiving (preference for dealing with the outer world). The dichotomies were drawn from the Myers-Briggs Type Indicator instrument which is based on Jung's theory of psychological types. The researcher coded each learner's answers into a four-digit code and gave individualised written feedback to each learner of careers that aligned well with their codes.

A composition of natural preferences is often viewed as a personality profile. Personality factors can have an impact on self-efficacy, for example, low openness is indicative of low CDMSE (Nauta, 2004). Learners were encouraged to be more open to a variety of career options in phase two of the programme where different career fields were analysed and documented. Research has indicated that CDMSE is also negatively affected by negative career thinking (Bullock-Yowell, Andrews, & Buzzetta, 2011) and neuroticism (Hartman & Betz, 2007) whereas conscientiousness and extraversion were the most robust personality predictors of positive career-related self-efficacy.

*Abilities*: The concept of Gardner's Multiple Intelligence Theory (2006) was introduced and learners were assured that abilities are not based on scholastic intelligence only. The seven intelligences are linguistic; logical-mathematical; spatial; bodily-kinaesthetic; musical; interpersonal and intrapersonal. It was noted that different careers require specific combinations of abilities.

Learners were given a worksheet where they were able to reflect on their abilities or strengths. Learners were encouraged to examine their past performances where they achieved well and easily and they were encouraged to see personal ability as an acquirable set of skills rather than inherited and unchangeable. Learners need to be helped to focus on skill development and not skill attainment. It is important that the learners' self-efficacy beliefs are consonant with their abilities. Self-appraisals that are inconsistent with past

performance or school performance need to be challenged as realistic self-efficacy beliefs are crucial. Ability perceptions affect a learner's sense of which career options are viable.

*Values:* A value is an enduring, personal belief that certain life goals and behaviour are preferable, for example, material wealth, aesthetic values, status or security. Adolescence is typically the life-stage when occupational status aspirations are established as well as being a stage when a person starts to question existing values in order to develop his/her own unique philosophy of life (MacKenzie, 1996).  De Bruin (2001) contends that values may be considered as important motivators of behaviour.

A value card-sort was completed to assist the learners' in the process of discovering their own personal values.  Each learner was given a pack of value cards to sort according to personal importance, and they were then required to glue them onto a master sheet.   Discussion groups were set up to consolidate the process.  Additionally, learners were required to examine their values and how these would affect their career choices.  Learners were also tasked with discussing personal perceptions and how this relates to their value system.

*Life-story:* The 'story telling' approach forms part of the narrative style of career counselling and has its origins in a non-western culture (McMahon & Watson, 2013). There are numerous important points of commonality that this approach shares with SCCT. Story telling emphasises connectedness, reflection, meaning-making, and agency.  Connectedness refers to a person's context and the range of influences that this plays on career decision-making.  South African career researchers and career practitioners are encouraged to add subjective methods to their counselling and assessment repertories by integrating positivist techniques with constructivism practices (Hartung, 2009; Maree, 2013). Learners were given the opportunity to write their life-story with the help of certain career-relevant questions (See page 11 in Manual in Appendix A).

*Reflections:* The process of self-discovery was consolidated through an activity which required the learners to answer pertinent questions. This reflective

exercise helped them to reflect on what they had learnt about themselves and they were encouraged to discuss these findings with their family and friends.

### 3.6.2 Second phase of programme:  World of work and further education.

Consistent with SCCT, the second phase of the intervention focused on an exploration of the work marketplace and occupational information. Langley (1989) advised that it is essential to have sufficient information to make sound career decisions.

The learners were advised on the exponential rate of change occurring in the world of work, for example, notions of self-employment and working for customers have replaced working for a boss; an ethos of loyalty to work and self has replaced the loyalty to an organisation; a person's marketability is viewed as more important than entitlement; personal freedom and control is valued more than job security and, most importantly, the work market place equates success in terms of skills and life-long learning.  The needs of the changing workplace align well with the SCCT tenets as there is a shift of emphasis to personal agency: personal branding and personal career building have become a prerequisite for success in the marketplace.  The changing workplace demands a person who is self-reliant and able to cope with change at work.  Jarvis and Keeley (2003) claim that the cornerstones of this new paradigm are termed the 'high five' principles:

- Know yourself, believe in yourself, and follow your heart.
- Focus on the journey, not the destination.  Become a good traveller.
- You are not alone.  Access your allies, and be a good ally.
- Change is constant and brings with it new opportunities.
- Learning is ongoing, and that is good.

Learners were encouraged to embrace this liberating new world of work.  Reese and Miller (2006) raised an interesting point when he noted that while the curriculum in most career courses appears to have changed little, the job market and career decision-making demands placed on students are changing continually.

Students need current and comprehensive information about the world of work they will launch into, but they also need skills to use the information effectively while connecting self-knowledge to exploration (Jarvis & Keeley, 2003). To unpack the plethora of possible careers, learners examined careers in various career field clusters.  Realistic career self-efficacy and accurate career-related outcome expectations were enhanced by training the learners to interpret occupational information accurately.

Scope for tertiary education and training in South Africa was explored as well as employment options if further education was not an option.   The intervention reached a crucial point when learners were shown the academic requirements for entry into tertiary educational institutions.  To highlight the link between academic performance and career choices, an activity was included where learners were shown how to calculate admission points to get into higher education courses based on their marks.

**3.6.3 Third phase of programme: Goals and decision-making.**  According to SCCT, through the process of building CDMSE and exploring the outcome expectations, vocational interests are developed which ultimately facilitate the process of career goal choices and action (Lent, Brown, & Hackett, 1994).   It follows, therefore, that it is important for the career intervention to promote realistic self-efficacy and accurate outcome beliefs because of the impact they have on the formation of realistic vocational interests and goals.

 SCCT emphasises the importance of personal goal setting, viewing it as a key motivator of behaviour (Lent et al., 1994).  Indeed, personal goal setting is an important mechanism through which people exercise personal agency in occupational pursuits.  Nevertheless, learners' goal choices will also be influenced by their contextual realities.

Effective goals hold the following characteristics:  they are clear, specific, divided into sub-goals, set close in time to intended actions, stated publicly, and held with strong commitment.

The third phase of the intervention sought to enhance self-efficacy for goal selection by helping learners establish career goals which are congruent with their personal profile.  Furthermore, Bernard-Phera (2000) argues that the choice of a career remains one of the most difficult decisions that the adolescent will have to make. Skills required for decision-making were addressed in the career development programme.

Lent et al. (2002) suggest that students typically have four primary needs in relation to making a career choice. Firstly, they tend to have a few career options and are not satisfied with the options; secondly, they are confused by the excess of options; thirdly, they require help with decision-making; and fourthly, they seek confirmation about a choice they have already made. Typically career interventions treat all students as having the same needs.

**3.6.4 Fourth phase of programme:  Barriers to career development.**  The SCCT perspective acknowledges that students' ability and willingness to translate their interests into goals, and their goals into action will be affected by environmental supports and barriers (Lent et al., 1994).  In other words, career decisions sometimes have to be made on factors other than interest.  More specifically, there are factors that influence the interest-choice relationship or even negate the role of interest in career choice, for example, financial, educational, physical or social factors or extrinsic outcomes (high salary, job security) may compromise a learner's preferred option. Additionally, career possibilities can be constricted because a person's environment offers limited or a biased exposure to efficacy-building experiences. Clearly, consideration has to be given to the structural, cultural, and socio-political barriers which also play a role in the career decision-making process.  It is important to guide occupational choice within these constraints and an intervention programme based on SCCT principles will incorporate strategies designed to ameliorate career barriers and increase support (Whiston, 2011).

Barrier-coping strategies include identifying potential barriers to career goals.  Research indicates that the use of predetermined lists of career barriers tends to produce more comprehensive lists of barriers than free thought-listing

techniques (Mc Whirter, 1997; Swanson & Tokar, 1991).  For the sake of clarity and working within time-constraints of the current intervention, it was decided to explore three groups of career barriers, namely, economic factors; social and environmental factors and academic challenges.

Learners were assisted to develop strategies to prevent or manage likely barriers to occupational pursuits.  Overcoming career barriers was dealt with in the intervention by reframing the learners' perceptions of barriers and helping them clarify the differences between real and perceived barriers.  Barriers that are perceived as uncontrollable and stable, and coming from external factors, are typically viewed as insurmountable. If people perceive insurmountable barriers to career entry or success, they feel unable to translate their goals into a series of actions (Barnard et al., 2008).  Stead et al. (2004) concluded from their study on career barriers amongst South African high school learners, that barriers may play an important role in career development during the school-to-work transition period.  Socio-political factors, such as affirmative action, seem to play a role in the perceptions of career barriers of teenagers, whereas, there was no significant evidence of gender-related perceived career barriers (Stead et al., 2004).

The career programme also sought to enhance learners' support systems and develop opportunity structures whereby students were trained to access resources. Garcia, Restubog, Toledano, Tolentino and Rafferty (2012) highlight the salient role of parental support in career decision-making, but note that the learners' perception of the support received impacts on the effect it has in either enhancing or impeding career decision-making self-efficacy. Ali et al. (2012) suggest individual activities be designed to enhance a learner's awareness and understanding of personal interests, strengths, and community support networks.

Albert and Luzzo (1999) warn that high CDMSE does not necessarily address all perceived barriers.  Using self-efficacy enhancing interventions are appropriate when a person has the skills and abilities to overcome barriers, but is unable to do so because of low CDMSE.

**3.6.5 Fifth phase of programme:  Career planning.**  Phase five of the career development programme sought to enhance self-efficacy in vocational planning through preparing learners for the job market and job application processes.

The intention was to develop learners' general employability skills. Learners were shown interviewing techniques and they were exposed to job application and résumé strategies. It is not just about finding the right job it is also about becoming the right worker (Jarvis & Keeley, 2003).

Career planning can only be undertaken by people if they believe they have control over their careers (MacKenzie, 1996).  A dominant theme underpinning SCCT and theories on motivation is personal agency.  It therefore seemed necessary to consider this construct in relation to the design of the career intervention.

## 3.7 Personal agency

Individual psychological empowerment indicates that a person feels in control of his/her life (Terre Blance, Butchart, & Seedat, 1994). Indeed, human agency is reflected in the ability to be responsible for one's own development and actions.

Learners need to develop a stronger personal agency with regard to their career development. SCCT provides a framework whereby career-enhancing behaviours are used and form the basis of personal empowerment and where people are encouraged to look at their self-efficacy beliefs and the influences that shape them. Buthelezi et al. (2009) postulate that a stronger personal agency can be achieved through interventions based on triadic reciprocity as learners' levels of CDMSE are increased through the four sources of self-efficacy.  The programme was designed to empower the learners to take control of their lives and career choices by making the programme interactive and reflective in nature. Learners were given opportunities to re-exam and re-interpret their capabilities and they were encouraged to contribute to the learning process and generate more answers from within themselves.  Indeed, a learner's mere participation in the programme was intended to be an empowering experience.  The title of the

programme, "The Game Plan:  You can be the captain of your team." encapsulates the concept of personal agency.

While it was important to include contents that would motivate, empower, and instil in learners a sense of agency, the researcher tried throughout to remain sensitive to the targeted groups' perceptions, experiences, and outcome expectations.  Stead and Watson (2006) raise the important point that in African and South Asian countries career choices are often a matter of fitting into what the family wants, and what the family needs.  Stead and Watson (2006) do, however, advocate that adolescents need to respond creatively to their environment in ways to enhance their career development.  The reality of the learners' environment was taken into cognisance in the design and presentation of the career development programme.

## 3.8 Presentation of the programme

The researcher presented the programme using fundamental pedagogical principles.  While the format, structure and general time-frame of the programme were adhered to, the researcher was sensitive to the learners' present needs and encouraged an interactive ethos in the class. The researcher viewed the learners as engaged participants where spaces for exploration of different meanings and understandings and questions were encouraged.

English is the medium of instruction at all three schools and so the programme was presented in English.

The format of instruction as well as the media to transmit the information was varied.  For example, a power-point presentation was designed and formed the basis of the instructional format and black/white boards were also used. Consonant with Brown and Krane's (2000) proposals, the learners were given opportunity for reflective writing in their workbooks, but the course also gave scope for group work when the learners dealt with issues in a group context.  The researcher was able to engage with learners on an individual level while group work was being undertaken.

### 3.9 Summary

The career development programme specifically designed for this study was based on SCCT.  The programme's primary aim was to enhance CDMSE and academic motivation for Grade 11 learners from different socio-economic strata.  Research has produced considerable evidence to support the notion that people with high CDMSE will be more certain about the type of career, work and job they want and know better how to search for and obtain that job (de Raaf, Dowie, & Vincent, 2009).   Motivation plays a significant role in students' academic engagement and achievement and therefore it is of value to identify factors that contribute to the development of academic motivation.

The intervention developed for the current study ensured that the four sources of self-efficacy, that is, mastery experience, vicarious experience, social persuasion, and physiological state, were directly and indirectly used in the design of the career development programme.  Personal mastery was fostered through encouraging reflections of past personal successes and personal strengths. Vicarious learning was promoted with a selection of career stories of people that the learners would be able to identify with, for example, someone who has persevered despite financial struggle and challenges. These stories were told to the learners at different points of the programme. Verbal persuasion was primarily achieved through the presentation of the programme which was delivered in an encouraging and supportive manner. Coping efficacy was bolstered by decreasing learners' anxiety related to the career decision-making process by demystifying the process through the intervention.

See Appendix A for the career intervention programme.

## CHAPTER 4

## RESEARCH METHODOLOGY

*"Research:  the curiosity to find the unknown, to make it known."*

Lailah Gifty Akita

### 4.1 Introduction

All approaches to career intervention studies must continue to be subjected to rigorous analysis and evaluations so that the most effective approaches can be used in practice (Erford & Crockett, 2012).  This study sought to form a link between the pragmatic utility of a career intervention programme and the empirical principles of social science theory.

Whereas chapter one identified the research problem and purpose of the study, the rationale for the theoretical framework used for the empirical investigation, and chapter two gave a detailed explanation and discussion of the main constructs of the study with respect to relevant literature reviewed, this chapter focuses on describing the research design and scientific methodology that underpinned the project.  The research methodology used in this intervention study will be discussed by elucidating the research problem and objectives, and by describing the sample, design, procedure, measuring instruments and statistical analysis employed in this investigation.  The chapter will conclude with a consideration of ethical issues pertaining to this study and a personal voice from the researcher, that is, a section on reflexivity.

### 4.2 Research problem

The research problem was borne out of an attempt to address unmet vocational needs of South African learners who are nearing the completion of their school education and preparing to launch their career journey.  In essence, they are reaching a juncture in their lives where well considered, informed career decision-making will positively impact the course of their future. A review of

interventions and resources in place in South Africa to facilitate this transition indicates a dismal shortfall. CDMSE is a construct that plays a central role in career decision-making and has been identified as encapsulating one of the core goals of career development (Lent et al., 2002).  Hence CDMSE will form a crucial dependent outcome variable in the study.

Academic performance and progress in South Africa is a matter of great concern.  Academic motivation plays an integral role in the academic outcomes of any student and, therefore, plays a powerful role in academic success. Academic motivation was also selected as a variable for this study to ascertain whether a career programme would serve to enhance the construct.  There also appears to be an intriguing relationship between CDMSE and academic motivation. While the two constructs have received extensive individual empirical attention from social science researchers, there is a dearth of information on the relationship shared between CDMSE and academic motivation as well as the impact of a career intervention programme on that relationship.  This study examined the effect a career development programme has on the relationship between CDMSE and academic motivation.

Career theorists have long recognised social class as a primary determinant of career behaviour (Naidoo, 1993). This is of particular salience in South Africa with its immense socio-economic disparity.  Furthermore, the South African education system still carries the legacy of the apartheid system whereby schools bear the stamp of 'previously disadvantaged' or 'ex-model C' and are characterised by significant socio-economic differences.  It was deemed relevant to extend the current study by underpinning the investigation with an examination of whether SES differences impact on the outcome of the career development programme.

The primary research question of this study is:  Can a career development intervention enhance the career decision-making self-efficacy and academic motivation of Grade 11 learners from diverse socio-economic schools?  The research also sought to ascertain whether the career intervention programme

asserted a positive correlative relationship between career decision-making self-efficacy and academic motivation.

## 4.3 Objectives of the study

To address the research problem, the following goals were identified:

- Design a career development intervention for Grade 11 learners.
- Determine the impact of the career development programme on Grade 11 learners' career decision-making self-efficacy and academic motivation.
- Determine the effect of a school's socio-economic status on the impact of a career development programme intending to enhance career decision-making self-efficacy and academic motivation.
- Evaluate the correlational relationship between career decision-making self-efficacy and academic motivation.

The following questions were generated by the goals of this study:

1. How effective was a career development programme, spread over six weeks for Grade 11 learners from diverse socio-economic schools, in enhancing career decision-making self-efficacy and academic motivation?
2. How did the career decision-making self-efficacy and academic motivation results of the three intervention groups compare with those of the three control groups: the intervention groups receiving six one-and-a-half hour sessions and the control groups receiving no intervention?
3. Was there a correlative relationship between career decision-making self-efficacy and academic motivation?
4. What was the impact of the socio-economic status of the school on a career development programme that intended to enhance career decision-making self-efficacy and academic motivation of Grade 11 learners?

5. Consistent with the current study's findings, what recommendations could be given for future Grade 11 career development interventions aiming to enhance career decision-making self-efficacy and academic motivation from different socio-economic schools?

Based on the current study's findings, what recommendations could be given to future Grade 11 career development interventions in relation to the socio-economic status of the school?

## 4.4 Sample

The career programme was specifically designed for Grade 11 learners for four primary reasons.  Firstly, a Grade 11 learner is generally 16 years of age and is at a developmental age which is typically characterised by self-examination, role try-out, and occupational exploration in school, leisure activities, and part-time work. Secondly, as the Grade 12 academic year is quite compact and pressurised because of national exit examinations, teachers are reluctant to release learners from lessons due to time constraints to complete syllabi. Grade 11 learners have the necessary time to work effectively through the career decision-making process and avoid crisis decision-making. Thirdly, there is still time for learners to remediate academic achievement and augment extra-mural activities required for their curriculum vitae and, finally, there is enough time to engage in career exploration and to access information on financial assistance and to process applications.

The career development intervention designed for this study was implemented at three coeducational schools in East London, Eastern Cape. To ensure the inclusion of grade 11 learners from different socio-economic backgrounds, three schools from diverse backgrounds were approached to participate in the study. The schools are designated as School A, School B and School C to protect the identities of the schools. School A is socially viewed as a school where most of the learners come from middle to higher socio-economic backgrounds; the school has approximately 60% White learners with a balance

of learners who are from Black, Coloured and Indian cultural groups[1]. School B learners are typically from middle to lower socio-economic backgrounds with approximately 50% Black learners, 40% White learners, and 10% Indian and Coloured learners.  School C is classified as a 'previously disadvantaged school' and the majority of learners are Black and Coloured who come from low socio-economic backgrounds. These assertions were endorsed by Mr Donald Junor who has worked for the Eastern Cape Department of Education as an Educational Psychologist for approximately thirty years.

A non-probability sampling technique was used in this quasi-intervention design, more specifically, convenience sampling.  The random assignment design is viewed as the golden standard of research, (Zevenbergen & Whitehurst, 2003) as the absence of random sampling limits confidence in the internal validity and generalisability of the results.  In other words, the researcher wants to ensure that the outcomes of the research are the result of the intervention, rather than external factors. Unfortunately using random sampling for an intervention study in a school system is often not an option due to logistics and the time constraints within the school programme.  It could be further argued that career development programmes are by design meant to be administered to an entire grade population and therefore random assignment is unrealistic. Learners were selected to be part of the present study based purely on logistical convenience based on their grade classes. Classes were selected based on timetable considerations and convenience, and classes were assigned to either the intervention groups or control groups at each of the three schools.

The creation of a control group is a technique used to try and control for as many external factors as possible and is often used in intervention studies. Learners in the intervention group were asked not to discuss their experiences with the control group learners, thereby trying to avoid contamination of results.

The study initially commenced with a total of 303 Grade 11 learners, but due to attrition ended with 222 participants. Of the 157 learners in the control

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South Africa remains a racialised society recovering from the effects of apartheid segregation, where divisions between racial groups and status descriptions of privilege/previously disadvantaged still remain evident.[1]

group, only 111 responses could be used due to absence from school on one or more of the three days when the groups were surveyed.  Of the 146 learners who formed the intervention group, the data of only 111 participants who attended all six sessions was used; 35 participants were absent from school on one or more of the school days when the intervention was presented.  Table 4.1 presents the distribution of the participants.

Table 4.1*:   Distribution of participants*

| SCHOOL | INTERVENTION GROUP | | | CONTROL GROUP | | | TOTAL |
|---|---|---|---|---|---|---|---|
| | **Male** | **Female** | **TOTAL** | **Male** | **Female** | **TOTAL** | |
| **School A** | 19 | 20 | 39 | 19 | 23 | 42 | 81 |
| **School B** | 9 | 27 | 36 | 7 | 27 | 34 | 70 |
| **School C** | 10 | 26 | 36 | 8 | 27 | 35 | 71 |
| **TOTAL** | | | 111 | | | 111 | 222 |

Whilst there was a relatively small sample size, intervention research does not typically involve large numbers and, therefore, it could be argued that this sample is not unusually small (Martin, 2005).

**4.5 Research design**

A quantitative approach with a quasi-intervention research design using a pre-test post-test control group comparison was used in this study to control for main effects such as history, maturation, testing and instrumentation (Campbell, 1957).  A quasi-intervention research design allows for an attempt at answering practical question in a real-life situation and thereby avoiding the artificiality of a laboratory situation (MacKenzie, 1996).  Pre- and post-intervention comparisons of CDMSE and academic motivation scores of learners from diverse socio-economic backgrounds were used with initial assessment conducted before the intervention and at the end of the intervention, and a follow up assessment was done eight weeks after the intervention.

## 4.6 Research procedure

Permission to conduct research at the three schools was obtained from the Eastern Cape Education Department.  The headmasters of the three targeted schools were also approached for permission to conduct the study and deliver the career development programme. Permission was granted by the three relevant people at the respective schools.

The career development programme was presented to the intervention group at each school once a week for six one-and-a-half hour sessions during the first term.  The total contact time was therefore nine hours with the researcher being the facilitator of the career development programme.  The control group continued to attend scheduled classes and did not engage in any of the programme's activities.

Prior to the study the learners had been exposed to only minimal career guidance. Learners willingly agreed to participate in the research project as they and their parents felt that it would be to their benefit and they did not view confidentiality as a major concern.  See Appendix B for letters of consent for learners from the intervention group and the control group, and Appendix C for letters of consent from the participants' parents.

The arrangements made for the administration and presentation of the programme by the respective school's staff members tended to vary among the three schools.  School B's management of the arrangements for the programme was meticulously planned and the school hall was allocated as the venue for the programme.  For the times designated for the programme, the media equipment was organised and the learners were waiting and ready to start the programme. The logistics worked seamlessly and the teacher-in-charge helped coordinate the return of the consent forms.  School A's management of the arrangements was fairly organised although there was confusion on several occasions with regard to venues.  The researcher, with the help of the learners, had to locate an empty venue in these instances. The classrooms at School A are all equipped with data-projectors, computers and whiteboards.

In contrast, the administration and planning at School C was quite chaotic. On several occasions a planned session of the programme was cancelled literally at the last minute for a range of reasons:  the school was closing early, load-shedding complications and confusion over the time-table changes.  Indeed, the timetable seemed to constantly shift and the researcher would arrive at the scheduled time and wait up to 40 minutes while the school was at 'break'. Equipment was generally a problem and, although the school had a data-projector, it seemed to be problematic to set it up.  White paper had to be stuck on the green 'blackboards' and an extension cord had to be located and fed out the classroom window to an electrical point as the classrooms do not have electrical points.  Despite these differences that appeared to reflect the socio-economic disparities among the three schools, the researcher, however, experienced no difference among the three schools' learners' engagement with the programme.  They were enthusiastic about the programme and rapport between researcher and learners was easily established.

The learners from both groups were asked to complete a biographical questionnaire which requested the following information about the learner: name, date of birth, current age, gender, home language, school, father's level of education, father's occupation, mother's level of education and mother's occupation.  See Appendix D for the biographical questionnaire used in the study.

The intervention group and the control group were first assessed before the programme was presented (Time One) and again at the end of the programme (Time Two) with the Career Decision Making Self-Efficacy Scale and the Academic Motivation Scale (High School Version).  Eight weeks later, both sets of groups at the three schools were assessed again (Time Three) with the same two questionnaires.  It was considered necessary to do the third time measurement as Martin (2005) comments that it is not uncommon to experience immediate gains as a function of an intervention, for the issues and concepts under focus are top-of-mind for participants. It is therefore expected that there would be enhancement in the outcome measures at the end of the programme,

but it would also be of interest to follow up within an eight week period of the career programme to see if the outcome levels were retained.  Although not part of the present study, longer term gains would be an even stronger test of sustainability over time.  This is a test of a learner's ability to sustain gains from an intervention (Martin, 2005).

## 4.7 Measuring instruments

Two measuring instruments were used for the purpose of this study, namely, the *Career Decision Making Self-Efficacy Scale – short form (CDMSES-SF)* (Taylor & Betz, 1983) and the *Academic Motivation Scale (AMS)* (Vallerand et al., 1992).

**4.7.1 Career Decision-Making Self-Efficacy Scale (CDMSES-SF).** The concept of CDMSE stems from the work of Taylor and Betz (1983) who were attempting to specify the causal factors involved in career indecision. A person's willingness to take control and ownership of his/her career path is viewed as one of the most important characteristics of successful career development. Thus, the CDMSE construct has been applied to understanding many aspects of career-related behaviours, including vocational choices, career decision-making and job search processes.  Previous studies on process domain self-efficacy have mainly used The *Career Decision Making Self-Efficacy Scale* (Taylor & Betz, 1983) and Career Search Self-Efficacy Scale (Solberg et al., 1994).  The Career Search Self-Efficacy Scale (Solberg et al., 1994) orients more towards specific job search activities whereas the CDMSES measures the overall decision-making process which is more appropriate for this study.

The conceptual framework of The *Career Decision Making Self-Efficacy Scale* (Taylor & Betz, 1983) was based on Bandura's Self-Efficacy Theory (1977) and was designed to measure the degree to which people feel confident at completing tasks related to career decision-making. More specifically, CDMSE beliefs would relate to the following:

- the likelihood that a person would choose to engage in career decision-making behaviour as opposed to avoiding career decision-making tasks

- the effort invested into the decision process

- the length of time a person will persist with decision-making efforts when faced with challenges; and

- the degree of success at achieving a career decision.

The short form version, The *Career Decision Making Self-Efficacy Scale – short form,* was developed by Taylor and Betz (1983) and used in this study to evaluate the impact of the career development programme on the construct of CDMSE.  See Appendix E for the *CDMSES-SF* (Taylor & Betz, 1983). There is a proliferation of empirical support for the usefulness of CDMSE in understanding career choices and the CDMSES-SF scale is one of the most widely used assessments tools for measuring CDMSE in both vocational research and practice (de Raaf, Dowie, & Vincent, 2009). Mackenzie (1996) postulates that the CDMSES-SF is a useful instrument for the South African context as it can be used for learners from different socio-economic levels.  De Bruin and Bernard-Phera (2002) contend that the CDMSES-SF is also valuable within the South African career counselling context as information with regard to a person's self-efficacy expectations and his/her decision-making ability can be yielded.

The CDMSES-SF consists of 25 items with the response to each statement reflecting the learner's confidence in being able to accomplish the described task based on a 5-point Likert-type scale ranging from one (no confidence at all) to five (complete confidence). Higher scores indicate greater levels of career decision-making self-efficacy.   The CDMSES-SF has five subscales measuring the five career choice competencies of Crites' (1961) model of career maturity, that is, Self-Appraisal; Occupational Information; Goal Selection;  Planning, and Problem-solving.

The Self-Appraisal subscale involves making an accurate assessment of one's career interests, skills, goals, and values and is measured by questions 5, 9, 14, 18, and 22.  An example of the items from this scale is, "How much confidence do you have that you could decide what you value most in an occupation?"

The second subscale, Gathering Occupational Information, involves the ability to describe an occupation of interest, as well as research additional information about one's chosen career field or about the job market in general.  It is measured in the CDMSES-SF scale by questions 1, 10, 15, 19, and 23.  An example of the items from this subscale is, "How much confidence do you have to find information in the library or on the internet about occupations you are interested in?"

The Goal Selection subscale focuses on the ability to identify a career goal that complements the individual's values, interests, and skills.  This self-efficacy is measured by questions 2, 6, 11, 16, and 20.  An example of the items from this scale is, "How much confidence do you have that you could select one occupation from a list of potential occupations that you are considering?"

The fourth subscale, Planning, describes tasks that prepare a person for the job market and job application process in his/her field of interest.  Question 3, 7, 12, 21, and 24 measure this subscale.  An example of the items from this scale is, "How much confidence do you have that you could make a list of your goals for the next five years?"

The subscale, Problem-Solving, assesses one's resilience when faced with occupational barriers.  This dimension is measured by questions 4, 8, 13, 17, and 25 of the CDMSES-SF scale.  An example of the items from this scale is, "How much confidence do you have that you could change occupations if you are not satisfied with the one you enter?"

***4.7.1.1 Reliability and validity of CDMSES-SF.***  Extensive empirical research has reported a high degree of internal consistency for the CDMSES-SF total scale. Table 4.2 reflects the internal consistency coefficients reported for the total scale from a range of studies.

Table 4.2*: Reliability coefficients for CDMSES-SF total scale*

| STUDY REFERENCE | COEFFICIENT | NATIONALITY OF SAMPLE |
|---|---|---|
| Betz et al. (1996) | 0.94 | American |
| Betz and Voyten (1997) | 0.93 | American |
| Mau (2000) | 0.92 | Taiwanese |
| Mau (2000) | 0.94 | American |
| Watson, Brand, Stead, and Ellis (2001) | 0.91 | South African |
| Creed et al. (2002) | 0.93 | South African and Australian |
| Betz, Hammond and Multon (2005) | 0.95 | American |
| Gushue et al. (2006) | 0.87 | African American |
| Amir and Gati (2006) | 0.93 | Israeli |
| Reese and Miller (2006) | 0.94 | American |
| Bullock-Yowell et al. (2011) | 0.94 | American |
| Gaudron (2011) | 0.95 | French |
| De Bruin and Cornelius (2011) | 0.87 | South African |
| Koumoundourou (2012) | 0.91 | Greek |
| Jin, Ye, and Watkins (2012) | 0.91 | Chinese |
| Komarraju et al. (2014) | 0.93 | American |
| Buyukgoze-Kavas (2014) | 0.92 | Turkish |

In a review of 41 published journal articles and seven dissertations, Nilsson, Schmidt, and Meek (2002) found alpha coefficients ranging from .83 to .96 for total scores on the CDMSES - SF.

Table 4.3 reflects the range of reliability coefficients yielded for the five subscales of the CDMSES-SF in studies from a range of different national contexts.

Table 4.3: *Reliability coefficients for subscales of CDMSES-SF*

| STUDY REFERENCE | RANGE | NATIONALITY OF SAMPLE |
|---|---|---|
| **Betz et al. (1997)** | 0.69 to 0.83 | American |
| **Watson et al. (2001)** | 0.75 to 0.80 | South African |
| **Creed et al. (2002)** | 0.72 to 0.79 | South African & Australian |
| **Nilsson, Schmidt, and Meek (2002)** | 0.69 to 0.83 | American |
| **Betz (2005)** | 0.73 to 0.85 | American |
| **Betz, Hammond and Multon (2005)** | 0.78 to 0.87 | American |
| **Amir and Gati (2006)** | 0.75 to 0.80 | Israeli |
| **Reese and Miller (2006)** | 0.74 to 0.89 | American |
| **Gaudron (2011)** | 0.59 to 0.70 | French |
| **De Bruin and Cornelius (2011)** | 0.54 to 0.63 | South African |
| **Jin, Ye, and Watkins (2012)** | 0.62 to 0.77 | Chinese |
| **Komarraju et al. (2014)** | 0.75 to 0.94 | American |
| **Buyukgoze-Kavas (2014)** | 0.61 to 0.81 | Turkish |

In one of the few South African studies using the CDMSES, De Bruin and Cornelius (2011) reported low reliability coefficients for the subscales and elected to use only the total score of the instrument for their study.  Jin, Ye and Watkins (2012) also achieved relatively low reliability coefficients for the subscales of occupational information, goal selection, and problem solving.  The low degree of reliability may indicate that certain tasks included in the goal selection and problem solving subscales are not appropriate for some cultural populations, particularly for those from collective cultures (Creed et al., 2002).

Miller et al. (2009) claim that a growing body of empirical research has demonstrated the ability of the CDMSES-SF to generate valid scores. Indeed, a substantial body of empirical research has also provided evidence of the construct, content and criterion validity of the CDMSES-SF. For example, studies found the scale significantly correlated with career indecision (Betz et al., 1996;

Betz & Luzzo, 1996; Robbins, 1985; Taylor & Betz, 1983; Taylor & Popma,1990); vocational identity (Holland, Johnston, & Asama, 1993; Gushue, Scanlan, Pantzer, & Clarke, 2006; Munson & Savickas,1998); career commitment (Betz & Sterling, 1993; Chung, 2002); career maturity (Luzzo, 1993); patterns of career choice (Gianakos, 1999); career commitment (Chung, 2002); external career locus of control (Luzzo et al., 1996); problems with career exploration (Blustein, 1989) and career adaptability (Rogers et al., 2008).

Evidence of convergent validity was provided through significant correlations with related scales such as the Career Decision Scale (Osipow, Carney, Winer, Yanico, & Koschier, 1976); Career Beliefs Inventory (Krumboltz, 1991); My Vocational Situation (Holland, Daiger, & Power, 1980); and General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995).

Factor analytic techniques are the most widely used methods for evaluation of cultural equivalence as they allow an analysis of the underlying dimensions of a scale across cultures.  Despite the psychometric support for CDMSES-SF total scores, several factor analytic studies failed to support the five factor structure indicated by Crites' theory-derived subscales of the CDMSES–SF (Betz et al., 1996; Betz, Hammond, & Multon, 2005; Buyukgoze-Kavas, 2014; Chaney, Hammond, Betz, & Multon, 2007; Creed et al., 2002; Gaudron, 2011; Hampton, 2005; Peterson & del Mas, 1998; Watson et al., 2001). Nevertheless, a study conducted with an Asian American and European American sample of university students claimed to have provided compelling evidence supporting the five-factor measurement model of the CDMSES-SF (Miller et al., 2009).  The researchers argued that the difference between studies that used American versus non-American samples may reflect conceptual equivalence which means that the meaning of a construct can vary across culturally distinct groups.  The discrepancy between findings might be that, while Americans and other cultures all make some type of career-related decision, the behaviours associated with this process may vary cross-nationally.  In other words, some of the items of CDMSES-SF may have different meanings in different cultures and, therefore, have a different pattern of relationships with other items.  Miller et al. (2009) also

argue that methodological limitations are inherent in a number of the prior factor analytic investigations.  They claimed that exploratory analysis is a less-than-robust analytic strategy to test a factor structure, because it is a data-driven technique and not theory-driven.

In a confirmatory factor analysis of the Career Development Questionnaire and the CDMSES-SF for South African high school learners, De Bruin and Bernard-Phera (2002) suggest that there is a general factor of General Career Decision-Making that underlies both questionnaires and they note that CDMSES-SF also measures self-efficacy expectations with regard to career decision-making.

Studies by Buyukgoze-Kavas (2014) and Gaudron (2011) supported a four factor structure, reflecting goal selection, problem solving, information gathering, and goal pursuit management. Chaney et al. (2007) also found that a four-structure solution was appropriate with an African American sample of college students.  Two cross-culture studies, Nam, Yang, Lee, Lee and Seol (2011) and Miguel, Silva, and Prieto (2013) validated the Korean and Portuguese versions of the CDMSES-SF respectively by using the Rasch model analysis and found support for the unidimensionality of the scale.

In sum, the high internal consistency, high test-retest reliability, evidence of convergent validity, and high inter-subscale correlations indicate that the total score of CDMSES-SF can be used as a generalised measure of self-efficacy expectation for career decision-making tasks, rather than a measure of five distinct factors involved in the process of career decision-making. Researchers have suggested that the CDMSES-SF rather be used as a generalised measure of CDMSE (Buyukgoze-Kavas, 2014; Creed et al., 2002; Peterson & del Mas, 1998; Taylor & Popma, 1990; Watson et al., 2001).

**4.7.2 Academic motivation scale.**  Self-determination theory proposes that people have an inherent drive or motivation to learn which is dependent on the fulfilment of the psychological needs of competence, autonomy, and relatedness. Social contexts either support or discourage motivation based upon fulfilment of these needs.  Borne out of the interaction between these needs and the

environment, three primary types of motivation have been identified: *intrinsic motivation*, the drive to pursue an activity simply for the pleasure or satisfaction gained from it; *extrinsic motivation*, the drive to pursue an activity due to a sense of obligation; and *amotivation*, the absence of a drive to pursue an activity and is characterised by a person's perception of incompetence and absence of purpose. These states of motivation are viewed as falling on a continuum in relation to the degree of self-determined behaviour reflected and range from amotivation to extrinsic to intrinsic (Deci & Ryan, 2000).

The present study used the *Academic Motivation Scale* (AMS) (Vallerand et al., 1992) which was based on self-determination theory (Deci & Ryan, 1985), to measure academic motivation. Indeed, the AMS operationalises self-determination theory by measuring degrees of self-determined motivation in academic contexts. See Appendix F for *Academic Motivation Scale* (Vallerand et al., 1992). Stover, de la Iglesia, Boubeta and Liporace (2012) assert that the AMS constitutes the most used instrument for the assessment of academic motivation and is aimed at adolescents and adults in academic environments.

The AMS has 28 items divided into seven subscales, each consisting of four item questions.  For each of the items, learners are asked to indicate on a 7-point Likert-type scale the extent to which they agree that the question describes a reason that they attend school.  An item rated 'one' would indicate that the respondent does not correspond at all to the statement, whereas an item rated 'seven' corresponds exactly with the respondent's reason for attending school. A high score on a subscale, therefore, indicates high endorsement of that particular academic motivation.  The AMS returns an overall score termed a Self Determination Index (SDI) and the higher the score, the more intrinsically motivated the learner is considered to be. Furthermore, learners who show a greater self-determination level also engaged in higher quality learning with a better academic record, showed more interest in class, a greater perceived competence and, good school attendance (Stover et al., 2012).

The seven subscales are designed to assess one of the seven motivational states, namely, Intrinsic Motivation to Know (IMTK), Intrinsic Motivation to Accomplish (IMTA), Intrinsic Motivation Experience Stimulation (IMES), External Regulation (EMER), Introjected Regulation (EMIN), Identified Regulation (EMID) and Amotivation (AMOT).

The Intrinsic Motivation to Know (IMTK) subscale relates to performing an activity for the pleasure and the satisfaction that one experiences while learning, exploring or trying to understand something.   IMTK is measured by questions 2, 9, 16, and 23 and an example of an item from this scale is, "I go to school because I experience pleasure and satisfaction while learning new things." Fairchild, Horst, Finney and Barron (2005) reported a Cronbach alpha coefficient of 0.86 for the subscale.

The Intrinsic Motivation to Accomplish (IMTA) subscale involves engaging in an activity for the pleasure and satisfaction experienced when one attempts to accomplish or create something.  IMTA is measured by questions 6, 13, 20, and 27 and an example of an item from this scale is, "I go to school for the pleasure I experience while surpassing myself in my studies."   Fairchild et al. (2005) reported a Cronbach alpha coefficient of 0.90 for this subscale.

The Intrinsic Motivation Experience Stimulation (IMES) subscale occurs when someone is engaging in an activity in order to experience stimulating sensations.  It is measured by questions 4, 11, 18, and 25 and an example of an item from this scale is, "I go to school because I really like going to school." Fairchild et al. (2005) reported a Cronbach alpha coefficient of 0.86 for this subscale.

The External Regulation (EMER) subscale refers to behaviour that is controlled by external sources, such as material rewards or constraints imposed by others (Deci & Ryan, 1985).  It is measured by questions 1, 8, 15, and 22 and an example of an item from this scale is, "I go to school in order to obtain a more prestigious job later on."   A Cronbach alpha coefficient of 0.85 was reported by Fairchild et al. (2005) for this subscale.

The Introjected Regulation (EMIN) subscale refers to behaviour that is reinforced through internal pressures, for example, guilt or anxiety, and is measured by questions 7, 14, 21, and 28 and an example of an item from this scale is, "I go to school because of the fact that when I succeed in school I feel important."  Fairchild et al.'s study (2005) yielded a Cronbach alpha coefficient of 0.85 for the subscale.

The Identified Regulation (EMID) subscale relates to a person valuing and judging the behaviour as important and therefore performs it out of choice and is measured by questions 3, 10, 17, and 24 and an example of an item from this scale is, "I go to school because I think that a high-school education will help me better prepare for the career I have chosen."   A Cronbach alpha coefficient of 0.77 was reported for the subscale in Fairchild et al.'s (2005) study.

Amotivation (AMOT) is characterised by feelings of incompetence and a high score typifies the absence of motivation.  It is measured by questions 5, 12, 19, and 26 and an example of an item from this scale is, "I once had a good reason for going to school; however, now I wonder whether I should continue." Fairchild et al. (2005) reported a Cronbach alpha coefficient of 0.85 for the subscale.

***4.7.2.1 Reliability and validity of Academic Motivation Scale.***  Research has yielded results which provide support for the internal consistency of the AMS and for each of the subscales (Fairchild et al., 2005; Smith, Davy, & Rosenberg, 2010; Vallerand et al., 1992, 1993) with the EMID subscale proving to be the least reliable subscale (Fairchild et al., 2005).  In a study Müller and Louw (2004) conducted with South African university students to examine the relationship between students' motivation and their learning environment, certain items of the AMS were employed and the reliability coefficients of the scales lie between 0.60 and 0.85.

Empirical studies have yielded strong convergent and divergent validity support for the AMS.  Results from confirmatory factor analysis confirmed the seven-factor structure of the AMS and provided support for the factorial validity of the scale (Cokley, 2000; Fairchild et al., 2005; Vallerand et al., 1992, 1993).

Research results have provided support for the AMS construct validity by finding the seven factor configuration of the scale with adequate model fit as the factors corresponded to the seven subscales of the AMS (Fairchild et al., 2005; Smith et al., 2010).  Additionally, evidence of convergent and discriminant validity of the AMS has been gathered by comparing and contrasting students' scores from the AMS to a variety of other motivation measures (Cokley, 2000; Fairchild et al., 2005). The AMS is viewed as having factorial validity and reliability and its use on motivation in educational research is supported (Vallerand et al., 1992).

The correlations between subscales failed to support the scale's simplex structure as proposed by self-determination theory. Vallerand et al. (1993) and Cokley's (2000) investigations were not able to adequately substantiate the scale's simplex structure which represents the self-determination theory continuum.  The simplex pattern of the scale was not supported as the correlations between the subscales did not display the hypothesised ordered magnitudes, for example, a correlation of 0.87 was found between IMTA and IMTK. It would be difficult to argue that these different entities represent different subtypes.  Furthermore, the difference between extrinsic and intrinsic motivation was not as clear as had been initially thought as Cokley (2000) found an overlap between the extrinsic and intrinsic motivation subscales. Nevertheless, correlational analyses revealed a differential relationship between the intrinsic measures and other criteria giving evidence for the value of their separation. In addition, confirmatory factor analysis indicated that the seven-structure model fits better than the model unifying the three types of intrinsic motivation. Extrinsic and intrinsic motivation should possibly be viewed as two independent orientations and not mutually exclusive constructs at two endpoints of a motivational continuum (Covington & Muëller, 2001).

The AMS has been successfully adapted into numerous different languages, for example, Turkish (Karaguven, 2012); Iranian (Taghipour, Gilaninia, Jalali, Azizipour, Razaghi, & Mousavian, 2012); Spanish (Stover et al., 2012); and Spanish dialect for Latin-American population (Stover et al., 2012);

and Greek (Barkoukis, Tsorbatzoudis, Grouios, & Sideridis, 2008) with satisfactory levels of validity and reliability reported.

## 4.8 Statistical analysis

Statistical analyses for this study were conducted in two phases: firstly, descriptive statistical analyses, factor and iterative item reliability analyses and correlations between all the variables were conducted. In the second phase, inferential statistical analyses were conducted to investigate the impact of a career development programme on the Grade 11 learners' CDMSE and academic motivation whereby group differences, a correlative relationship, and group interaction effect were analysed across the time series.  Data from the control group and the intervention group were coded numerically and analysed using the independent t-test to identify differences between the control and intervention group at Time One; Time Two; and Time Three in terms of CDMSE. A paired sample t-test was used to test for significant mean differences between the experiment groups Time One, Time Two and Time Three with regard to CDMSE.  The data yielded from the AMS scores was subjected to independent t-test analysis to test for differences between the intervention group and control group. Furthermore, repeated measures MANOVA, repeated measures ANOVA and Tukey HSD, which require a higher threshold of significance, were also conducted on the data gained from the AMS.  A Pearson product-moment correlation coefficient was performed to test for a significant correlative relationship between CDMSE and academic motivation.  Finally, a one-way ANOVA was used to determine the interaction among the three different school groups.

## 4.9 Consideration of ethics

Permission for the study was obtained at provincial and school levels to conduct the research at the respective schools. The senior management teams of the schools will be presented with a report of the project once it is completed.

Informed consent is achieved by giving the subjects an explanation of the research and with the option of terminating their participation at any time with no penalty (McMillan & Schumacher, 2006). Written consent was obtained from the participants and their parents by signing a consent form wherein a general description of the aims and nature of the study were provided.  Both parents and the learner needed to sign for the learner to participate in the study.

Confidentiality means that the privacy of the participants is protected. Although participants' names were solicited to compare data across the time series, assigned codes were used to replace personal names. The privacy of the learners is protected and data was stored on a password protected memory stick with only the researcher having access to it.

No apparent risk of harm or offence to the participants was anticipated and there were no adverse reactions from any of the participants.  There were benefits expected to accrue to the participants of the intervention group. The participants from the control group have been offered the opportunity to do the intervention programme after the completion of the post tests.

## 4.10 Reflexivity

Reflexivity is typically a concept central to qualitative research methodology; nevertheless, whether qualitative research or quantitative research is being conducted, the researcher brings her own subjectivity to every step of the research process.  Indeed, research is often a reflection of the researcher's academic and personal biography.  The perspective of the researcher shapes the research, be it quantitative, qualitative or laboratory science, as numerous personal, emotional, ideological and political dimensions impact on the research project. A researcher's background and context will usually affect what is chosen to investigate, the perspective of the investigation, the methodology, the findings considered most appropriate, and the understandings and conclusions drawn from the study (Malterud, 2001).

Reflexivity promotes trustworthy enquiry and causes the researcher to be aware of his/her effect on the process and outcomes of research.  It is, therefore,

valuable to understand something about the background, position, perspective, beliefs and values of the researcher of this study.  Furthermore, it is a helpful process whereby the researcher is assisted with situating him/herself in relation to the constructs under examination and the connection to personal contexts.

My interest in career psychology evolved over many years. My father, who had sponsored and supported my brothers' tertiary education in medicine and accounting, was of the opinion that women should marry well and not pursue a career.  When I was a seventeen year-old Grade 12 learner preparing for my post-matriculation education, my father refused to support or sign both my application to study at university and a bursary application. This is a crucial juncture where so many young South Africans find themselves: ill-equipped to make career decisions that may impact the rest of their lives.

I come to this research project having observed and experienced the importance of CDMSE and realised how it would have empowered me to understand my career profile, the world of work and ways to overcome financial constraints.  Furthermore, CDMSE would have enabled me to dialogue more effectively with my father and would have proved invaluable in directing me towards more suitable career alternatives.

After completing Grade 12, I started work as a librarian assistant as a desperate attempt to gain intellectual stimulation; however, my lack of career knowledge resulted in eight hours a day of tedious work which allowed little opportunity to learn and develop. I resigned within the week and, thereafter, endured twelve long years of dire vocational unhappiness and frustration until Rhodes University established a Humanities Faculty at the East London campus and I registered to study for a degree in psychology.  I would never have embarked on work as a librarian assistant, surveying draughtswoman, administrative clerk and a work study officer if I had a developed CDMSE.  I was unaware that these jobs were diametrically opposed to my career profile.

Despite the barriers and hardship of studying with a family of three young children and a household to manage, I graduated with an undergraduate degree and an honours degree in psychology. While studying for my honour's degree I

registered concurrently with UNISA and attained a Higher Education Diploma. I was awarded academic colours through both universities at the end of the year. At the time of completing my studies, South Africa was going through a turbulent time in its political history as the country went through a social revolution and South Africa's first democratic government was elected. Teachers from the white demographic sector were being redeployed or given retirement packages.   It was at this time I entered the education sector and got locum positions at a local high school with a strong academic reputation for three consecutive terms in a range of subjects. I was eventually offered a full-time government post as a mathematics teacher and school counsellor.  I acknowledge the gravity of career barriers; however, I am of the opinion that many barriers can be overcome, especially with the aid of realistic career goals and career knowledge.  Moreover, I believe that CDMSE is an essential ingredient for helping people realise their potential, be it academically, vocationally or emotionally.  This assumption has framed my approach to this investigation.

My work at the school highlighted the need among teenagers for effective career coaching. I researched and explored methods that had empirically and anecdotally enhanced career self-efficacy and, in addition, I discovered the intriguing relationship between a learner's career goal-setting and improved academic motivation.  I established and developed a fully equipped Career Centre at the school and in 2006 went to the United Kingdom to do further research to improve the facility.

I also became aware of the need in the community for academic support with regard to teaching mathematics and so, in collaboration with my colleagues, I developed a programme to assist Grade 12 learners from previously disadvantaged schools with mathematics.  The programme was funded by the South African Institute of Chartered Accountants (SAICA) and the results were most rewarding as many learners were empowered to pursue their career aspirations through attaining academic excellence in mathematics.  It was through this programme that I became aware of the career needs of learners in previously disadvantaged schools.

After twelve fruitful years at the school I was selected to study for my Master's degree in Counselling Psychology at Fort Hare University (East London Campus).  My family again had to sacrifice loss of income as I returned to university.  My thesis was a continuation of my interest in career development for high school learners and underscored the value of an effective career development programme.

I have since established a practice as a Counselling Psychologist and for the last seven years I have worked extensively with teenagers from all sectors of the community assisting them with enhancing their CDMSE. I have observed the irreversible damage to people's lives and their career paths through uninformed career decision-making.  The South African education system is constantly restructuring systems and syllabi and often career exploration and development gets neglected at public schools from all socio-economic sectors of the community.

Professor Naidoo has afforded me the opportunity to extend my empirical research in the field of career development.  This is not simply an academic exercise, but the realisation of a dream to continue my academic exploration and research in the area of my passion.  I have developed the career intervention programme for the South African context.  While the primary goal of the research is to evaluate the impact of the career development programme of Grade 11 learners' career decision-making self-efficacy and academic motivation, it is my intention to investigate the influence of SES on the effectiveness of the programme.

I bring with me a history of working with learners and experience in education.  This has proved invaluable as I have insight into the dynamics in the classroom, the collective psyche of the teenager, as well as the logistics that underpin the daily routine of the school structure and schedule.   The relationships that I have established over the years with the education fraternity in East London also gave me access to the schools.  The learners embraced the programme with enthusiasm at all three schools and engaged with the material with keen interest and many questions.

My personal history and experiences have served to guide a significant part of this thesis which clearly underscores motivation and interest in this field of research and the intention to develop a programme that will benefit many young South Africans.

## 4.11 Chapter summary

Researchers are urged to focus on intervention studies by using rigorous intervention methodologies to further develop understanding of career intervention (Erford & Crocket, 2012).  In this chapter, the research problem was discussed with the objectives of the study clearly stated.  Furthermore, the research design was explained and justified.  The demographic details of the participants were presented and a detailed analysis given of the validity and reliability of the measuring instruments used in the study. A description was also given of the statistical analysis used.  The chapter concluded with a consideration of the ethical issues and an acknowledgement of the researcher's personal perspective.

The results of this study will be presented in the next chapter.

*CHAPTER 5*

**RESULTS OF THE STUDY**

*"Statistics is the grammar of science."*

Karl Pearson

**5.1 Introduction**

This study sought to examine whether a career development programme based on a SCCT framework could effectively impact on the career decision-making self-efficacy beliefs and the academic motivation of Grade 11 learners from 3 different socio-economic backgrounds.  To address this study's research question, the following goals were established: design a career development programme for Grade 11 learners; determine the impact of the intervention on Grade 11 learners' career decision-making self-efficacy and academic motivation; evaluate the correlational relationship between career decision-making self-efficacy and academic motivation; and, finally, examine the effect of a school's SES on the impact of the career development programme.

In respect of the stated research goals and questions, the following are the composite research hypotheses and accompanying null hypotheses for the study:

Hypothesis One:

The career development programme would enhance the CDMSE of Grade 11 learners who attended schools with diverse socio-economic backgrounds.

Null hypothesis One:

The career development programme would not enhance the CDMSE of Grade 11 learners who attended schools with diverse socio-economic backgrounds.

Hypothesis Two:

The career development programme would enhance the academic motivation of Grade 11 learners who attended schools with diverse socio-economic backgrounds.

Null hypothesis Two:

The career development programme would not enhance the academic motivation of Grade 11 learners who attended schools with diverse socio-economic backgrounds.

Hypothesis Three:

The career development programme would significantly strengthen the correlation between career decision-making self-efficacy and academic motivation of Grade 11 learners who attended schools with diverse socio-economic backgrounds.

Null hypothesis Three:

The career development programme would not significantly strengthen the correlation between career decision-making self-efficacy and academic motivation of Grade 11 learners who attended schools with diverse socio-economic backgrounds.

The three hypotheses were tested in this study by using a quasi-intervention time series design with pre- and post-intervention comparisons of CDMSE and academic motivation scores of learners from three schools with diverse socio-economic backgrounds.

In reporting on these hypotheses, chapter five will document the statistical results of this study as well as address the hypotheses of the study.

**5.2 Demographic details of participants.**  A description of the demographic details of the participants relative to age, gender, home language, father's occupation, and mother's occupation is provided in Table 5.1 to Table 5.8 respectively.

Table 5.1*: Distribution of participants' age categories*

| AGE (years) | FREQUENCY | | PERCENTAGE (%) | | TOTAL | |
|---|---|---|---|---|---|---|
| | Intervention | Control | Intervention | Control | Frequency | Percentage (%) |
| 15 | 9 | 8 | 8.11 | 7.21 | 17 | 7.7 |
| 16 | 66 | 66 | 59.46 | 59.46 | 132 | 59.5 |
| 17 | 27 | 30 | 24.32 | 27.03 | 57 | 25.7 |
| 18 | 5 | 4 | 4.50 | 3.60 | 9 | 4.1 |
| 19 | 4 | 3 | 3.60 | 2.70 | 7 | 3.2 |
| Total | 111 | 111 | 100 | 100 | 222 | 100.0 |

A Chi-square test was performed to determine whether there was a significant difference between the control and intervention group with regard to age.  There were no significant differences with regard to age between the two groups: $x^2$ (4, $N$ = 222) = 0.47, $p$ = .98.  While the age range was from 15 to 19 years, the sample was predominantly comprised of 16 year old learners with the sample mean age being 16.36 years, SD = 0.81.  The distribution of participants' age categories is presented in *Figure 5.1.*
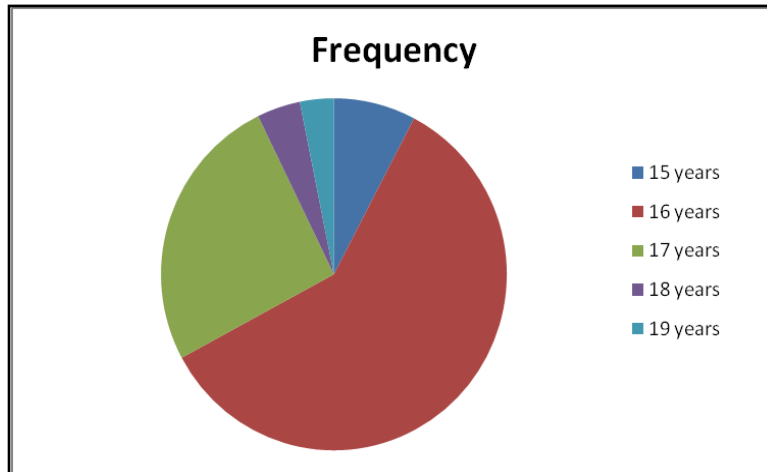
*Figure 5.1:* Distribution of participants' age categories

While gender was not a specific variable of the current study, it is interesting to note that female learners comprised two-thirds of the sample group. A Chi-square test was performed to determine whether there was a significant difference between the control and intervention group with regard to gender. There were no significant differences with regard to gender between the control group and the intervention group: $x^2$ (1, $N = 222$) = 0.33, $p = .57$

Table 5.2*:  Distribution of participants' home language*

| HOME LANGUAGE | FREQUENCY | | PERCENTAGE (%) | | TOTAL | |
|---|---|---|---|---|---|---|
| | Intervention | Control | Intervention | Control | Frequency | Percentage (%) |
| English | 41 | 34 | 36.94 | 30.63 | 75 | 33.8 |
| Xhosa | 59 | 60 | 53.15 | 54.05 | 119 | 53.6 |
| Afrikaans | 11 | 17 | 9.91 | 15.32 | 28 | 12.6 |
| Total | 111 | 111 | 100 | 100 | 222 | 100.0 |

A Chi-square test was performed to determine whether there was a significant difference between the control and intervention group with regard to

home language.   No significant differences were found with regard to home language between the two groups: $x^2$ (2, $N$ = 222) = 1.95, $p$ = .38

The career programme was presented in English.   *Figure 5.2* illustrates that English was not the mother-tongue for the majority of participants; however, English is the major language of instruction at all of the schools who were part of the study.
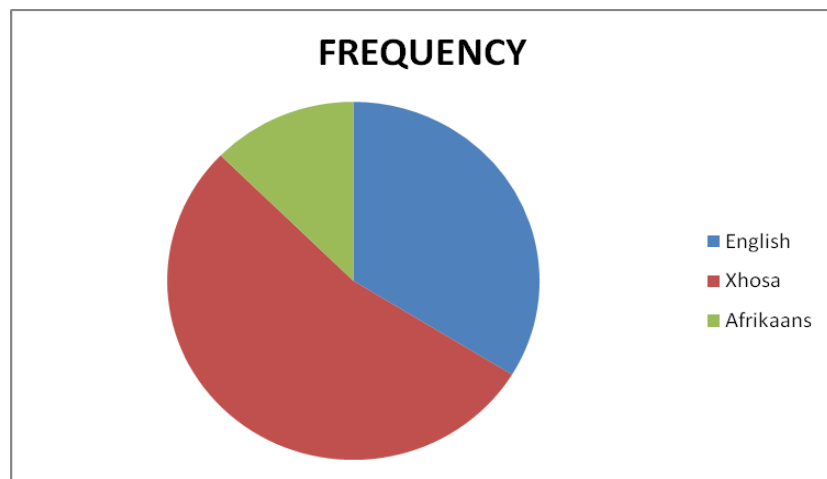


*Figure 5.2:*  Distribution of participants' home language

Table 5.3*:  Highest educational qualification of participants' fathers*

| HIGHEST EDUCATIONAL QUALIFICATION | FREQUENCY | | PERCENTAGE | | TOTAL | |
|---|---|---|---|---|---|---|
| | Intervention | Control | Intervention | Control | Frequency | Percentage (%) |
| High School | 49 | 43 | 53.26 | 49.43 | 92 | 41.4 |
| Nat. Diploma | 8 | 10 | 8.70 | 11.49 | 18 | 8.1 |
| Degree | 34 | 33 | 36.96 | 37.93 | 67 | 30.2 |
| Trade/Artisan | 1 | 1 | 1.09 | 1.15 | 2 | .9 |
| Total | 92 | 87 | 100.00 | 100.00 | 179 | 80.6 |

A total of 43 learners (19.4%) were not aware of their father's educational level or did not want to disclose it.

A Chi-square test was performed to determine whether there was a significant difference between the control and intervention group with regard to

the educational qualifications of the participants' fathers. There were no significant differences between the two groups: $x^2$ (3, $N = 179$) = 0.49, $p = .92$

Table 5.4*: Highest educational qualification of participants' mothers*

| HIGHEST EDUCATIONAL QUALIFICATION | FREQUENCY | | PERCENTAGE | | TOTAL | |
|---|---|---|---|---|---|---|
| | Intervention | Control | Intervention | Control | Frequency | Percentage (%) |
| High School | 51 | 50 | 48.11 | 47.62 | 101 | 45.5 |
| Nat. Diploma | 15 | 9 | 14.15 | 8.57 | 24 | 10.8 |
| Degree | 40 | 46 | 37.74 | 43.81 | 86 | 38.7 |
| Total | 106 | 105 | 100.00 | 100.00 | 211 | 95.0 |

A total of 11 learners (5.0%) were not aware of their mother's level of education or did not want to disclose it.

A Chi-square test was performed to determine whether there was a significant difference between the control and intervention group with regard to the educational qualifications of the participants' mothers' educational qualifications. The results indicate that there were no significant differences between the control group and the intervention group: $x^2$ (2, $N = 211$) = 1.92, $p = .38$.

Table 5.5 and Table 5.6 present the distribution of the occupations held by the participants' fathers and mothers respectively. The occupations were grouped according to the Nam-Power-Boyd Occupational Status scale (2000). The Nam–Powers–Boyd Occupational Status scale for the year 2000 is the sixth in a series of such scales that goes back to the end of the 19th century. Currently, three commonly used occupational scales are Siegel's scale which is viewed as measuring occupational prestige; Duncan's scale which measures socio-economically predicted prestige; and the Nam-Powers-Boyd scale which is considered to measure purely socio-economic factors (Nam & Boyd, 2004).

Table 5.5: *Distribution of the occupations held by the participants' fathers*

| OCCUPATIONS | FREQUENCY | PERCENTAGE (%) | VALID PERCENTAGE (%) |
|---|---|---|---|
| Unemployed | 15 | 6.8 | 8.3 |
| Management and self-employed | 30 | 13.5 | 16.6 |
| Business operation specialists | 4 | 1.8 | 2.2 |
| Financial specialists | 8 | 3.6 | 4.4 |
| Architecture and engineering | 6 | 2.7 | 3.3 |
| Community and social services | 1 | .5 | .6 |
| Legal occupations | 3 | 1.4 | 1.7 |
| Education, training, and library occupations | 16 | 7.2 | 8.8 |
| Arts, design, entertainment, sports, and media | 2 | .9 | 1.1 |
| Healthcare practitioners | 11 | 5.0 | 6.1 |
| Healthcare support | 3 | 1.4 | 1.7 |
| Protective service | 19 | 8.6 | 10.5 |
| Sales | 14 | 6.3 | 7.7 |
| Office and administrative support | 12 | 5.4 | 6.6 |
| Farming, fishing and forestry | 2 | .9 | 1.1 |
| Construction | 12 | 5.4 | 6.6 |
| Installation, maintenance, and repair workers | 8 | 3.6 | 4.4 |
| Production | 5 | 2.3 | 2.8 |
| Transportation and material moving | 10 | 4.5 | 5.5 |
| Total | 181 | 81.5 | 100.0 |
| *Information unknown* | *41* | *18.5* | |
| Total | 222 | 100.0 | |

Table 5.6*: Distribution of the occupations held by the participants' mothers*

| OCCUPATION | FREQUENCY | PERCENTAGE (%) | VALID PERCENTAGE (%) |
|---|---|---|---|
| Unemployed | 28 | 12.6 | 13.4 |
| Management and self-employed | 22 | 9.9 | 10.5 |
| Business operation specialists | 3 | 1.4 | 1.4 |
| Financial specialists | 3 | 1.4 | 1.4 |
| Architecture and engineering | 1 | 0.5 | 0.5 |
| Community and social services | 7 | 3.2 | 3.3 |
| Legal occupations | 1 | 0.5 | 0.5 |
| Education, training, and library occupations | 47 | 21.2 | 22.5 |
| Arts, design, entertainment, sports, and media | 3 | 1.4 | 1.4 |
| Healthcare practitioners | 4 | 1.8 | 1.9 |
| Healthcare support | 16 | 7.2 | 7.7 |
| Protective service | 8 | 3.6 | 3.8 |
| Food preparation and serving | 1 | 0.5 | 0.5 |
| Building and grounds cleaning and maintenance | 3 | 1.4 | 1.4 |
| Sales | 13 | 5.9 | 6.2 |
| Office and administrative support | 44 | 19.8 | 21.1 |
| Production | 4 | 1.8 | 1.9 |
| Transportation and material moving | 1 | 0.5 | 0.5 |
| Total | 209 | 94.1 | 100.0 |
| *Information unknown* | *13* | *5.9* | |
| Total | 222 | 100.0 | |

It is significant to note that nearly 20% of the participants did not know or indicate their father's level of education and occupation and approximately 5% of the learners did not know their mother's level of education and occupation.   It could be inferred that a number of participants come from families where

education and/or occupations are not valued or discussed. Alternatively, the nature of the parent/child relationship could be questioned as well as whether the father was absent or known. It could also be that the learner may have been reluctant to disclose the requested information.

In this study, SES is a significant variable. There are numerous ways of establishing the SES of learners. Patel, Salahuddin and O Brien (2008), for example, assessed SES by asking students to report whether they received free lunch, reduced lunch fee, or neither. SES can be measured through education, occupation, and income, and it is commonly assumed that adolescents' SES is determined by their parents' SES. Nam and Boyd (2004) assert that education and income are valid indicators of what is meant by SES. However, due to privacy considerations and limitations in obtaining the income level of parents, the use of parents' level of education and occupation were used as a proxy for SES of the learners participating in this study.

Participants were drawn from three schools with differing socio-economic contexts. As described in chapter four, School A is socially viewed as a school where most of the learners come from middle to higher socio-economic backgrounds; School B learners are typically from middle to lower socio-economic backgrounds; and School C is classified as a 'previously disadvantaged school' and has learners who come from low socio-economic backgrounds.

Table 5.7 reflects the distribution of the participants of the study according to schools.

Table 5.7: *Distribution of the participants' parents' education per school*

| EDUCATION LEVEL | SCHOOL A | SCHOOL B | SCHOOL C | TOTAL |
|---|---|---|---|---|
| **High School** | 50 | 44 | 99 | **193** |
| **Nat. Diploma** | 17 | 17 | 8 | **42** |
| **Degree** | 84 | 60 | 9 | 153 |
| **Trade/Artisan** | 0 | 2 | 0 | **2** |

*Figure 5.3* indicates that more School A parents generally have higher levels of education than the other two schools and the majority of School C parents have a secondary level of education.
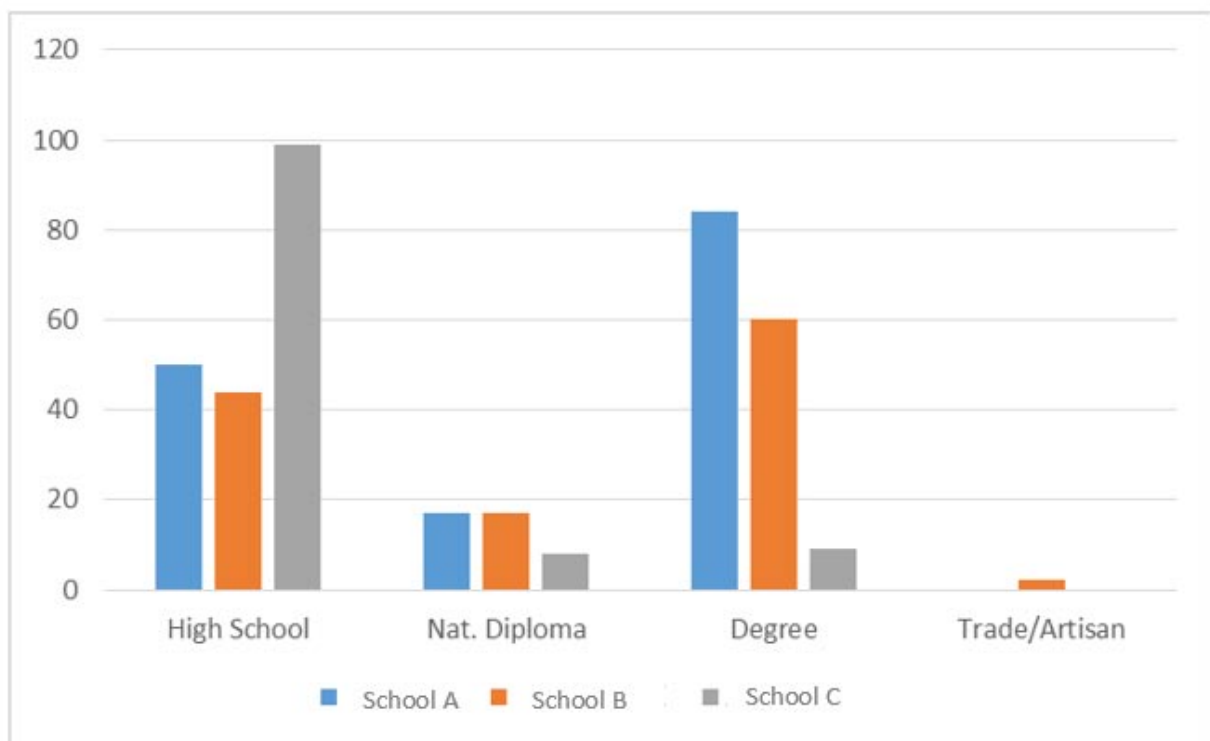


*Figure 5.3:* Distribution of the participants' parents' education per school

Table 5.8*: Distribution of the participants' parents' occupation per school*

| OCCUPATION | SCHOOL A | SCHOOL B | SCHOOL C |
|---|---|---|---|
| Unemployed | 2 | 6 | 35 |
| Management and self-employed | 15 | 31 | 6 |
| Business operation specialists | 7 | 0 | 0 |
| Financial specialists | 7 | 4 | 0 |
| Architecture and engineering | 3 | 4 | 0 |
| Community & social services | 5 | 0 | 3 |
| Legal occupations | 2 | 2 | 0 |
| Education, training, and library occupations | 26 | 30 | 7 |
| Arts, design, entertainment, sports, and media | 5 | 0 | 0 |
| Healthcare practitioners | 11 | 3 | 1 |
| Healthcare support | 7 | 7 | 5 |
| Protective service | 11 | 7 | 9 |
| Food preparation & serving | 0 | 1 | 0 |
| Building & grounds cleaning and maintenance | 1 | 0 | 2 |
| Sales | 10 | 7 | 10 |
| Office and administrative support | 21 | 19 | 16 |
| Production | 1 | 1 | 7 |
| Transportation and material moving | 2 | 2 | 7 |
| Farming, fishing and forestry | 2 | 0 | 0 |
| Construction | 4 | 3 | 5 |
| Installation, maintenance and repair workers | 2 | 3 | 3 |

Table 5.9 shows the Nam-Powers-Boyd Occupational Status scores of the participants' parents' occupations from the three different schools.

Table 5.9: *The 2000 Nam-Powers-Boyd Occupational Status scores for parents'*
*earnings*

| CATEGORY | OCCUPATIONAL FIELD | | SCHOOL | | |
|---|---|---|---|---|---|
| | | SCORE | A | B | C |
| CATEGORY 1 | Computer and mathematical occupations | 89.2 | 0 | 0 | 0 |
| | Architecture and engineering occupations | 88.7 | 3 | 4 | 0 |
| | Life, physical, and social science occupations | 84.4 | 0 | 0 | 0 |
| | Legal occupations | 83.0 | 2 | 2 | 0 |
| | Healthcare practitioners and technicians | 78.8 | 11 | 3 | 1 |
| | Management and self-employment | 78.2 | 15 | 31 | 6 |
| | Financial specialists | 79.6 | 7 | 4 | 0 |
| | Business operations specialists | 73.8 | 7 | 0 | 0 |
| | Total: | | **45** | **44** | **7** |
| CATEGORY 2 | Community and social services occupations | 68.0 | 5 | 0 | 3 |
| | Education, training, and library occupations | 66.0 | 26 | 30 | 7 |
| | Art, design, entertainment, sports, and media | 63.0 | 5 | 0 | 0 |
| | Protective service occupations | 61.0 | 11 | 7 | 9 |
| | Sales occupations | 53.6 | 10 | 7 | 10 |
| | Installation, maintenance, and repair occupations | 51.2 | 2 | 3 | 3 |
| | Office and administrative support occupations | 49.0 | 21 | 19 | 16 |
| | Healthcare support occupations | 46.8 | 7 | 7 | 5 |
| | Total: | | **87** | **73** | **53** |
| CATEGORY 3 | Production occupations | 45.6 | 1 | 1 | 7 |
| | Transportation and material moving occupations | 42.1 | 2 | 2 | 7 |
| | Construction trades | 38.1 | 4 | 3 | 5 |
| | Extraction workers | 37.8 | 0 | 0 | 0 |
| | Personal care and service occupations | 33.1 | 0 | 0 | 0 |
| | Building and grounds cleaning and maintenance | 28.0 | 1 | 0 | 2 |
| | Farming, fishing, and forestry occupations | 23.9 | 2 | 0 | 0 |
| | Food preparation and serving occupations | 12.7 | 0 | 1 | 0 |
| | Total: | | **10** | **7** | **21** |
| *Unemployed* | Total: | | **2** | **6** | **35** |

The occupational status scores were calculated by using earnings of a sample of people representing each occupational field (Nam & Boyd, 2004). Based on the Nam-Powers-Boyd Occupational Status scores, Table 5.9 also presents the three categories that were formed to represent high, middle, and low earning status of the participants' parents from the three schools.

*Figure 5.4* shows that the participants' parents from School A achieved the highest scores for Category 1 and 2, whereas School C participants' parents achieved the highest scores for Category 3 and the "Unemployed" group.  This correlates with the educational level of the participants' parents and confirms the social assertion that School A could be viewed as a school where families were from a middle to high socio-economic status; School B from a middle to low socio-economic status level; and School C representing a school with families from a lower socio-economic level.
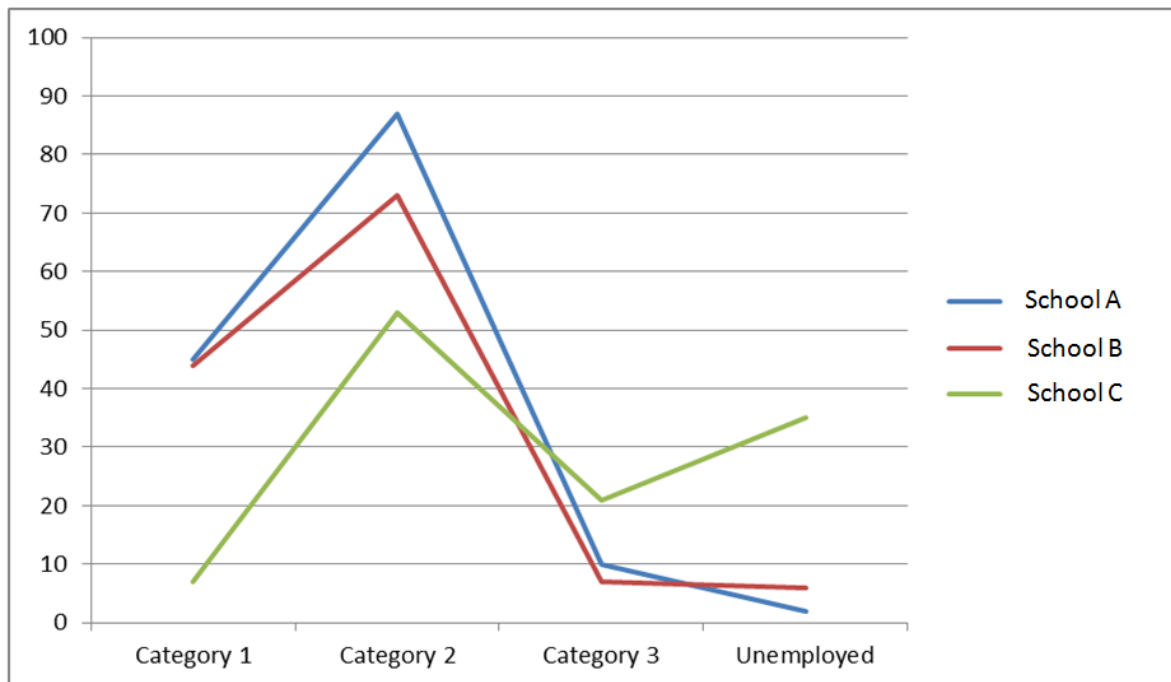


*Figure 5.4:* Occupational/earning status of parents according to schools

## 5.3 First hypothesis

Separate statistical analyses were conducted to first assess the reliability of the CDMSE-SF scores in the study and, secondly, to assess the differences in the CDMSE scores for the two groups across the 3 time series.

## 5.3.1 Results of statistical analysis for CDMSE

***5.3.1.1 CDMSES-SF: Reliability.***  Cronbach alpha coefficients reflect the internal consistency and reliability of measuring scales and provide an indication of whether the results obtained on the measure and further calculations can be trusted. An alpha value of .7 or higher indicates a very good reliability that can support the assumption that similar results would be achieved with a larger sample of respondents (Finchelescu, 2002). The current study yielded low Cronbach alpha coefficients for the five subscales of the CDMSES-SF across the three time measurements and they are presented in Table 5.10.

Table 5.10:  *Cronbach alpha coefficients for the five subscales of the CDMSE-SF*

|  | TIME ONE | TIME TWO | TIME THREE |
|---|---|---|---|
| **Occupational Information** | 0.60 | 0.63 | 0.66 |
| **Self-Appraisal** | 0.57 | 0.64 | 0.58 |
| **Goal Selection** | 0.68 | 0.69 | 0.68 |
| **Planning** | 0.60 | 0.66 | 0.69 |
| **Problem-Solving** | 0.47 | 0.58 | 0.64 |

Consistent with other South African studies and recommendations by South African researchers (De Bruin & Cornelius, 2011; Watson et al., 2001), only the total scores of the CDMSES-SF were used for the purposes of this research.  The alpha coefficient yielded for the total score of the CDMSES-SF in this study was 0.86 at Time One, 0.88 at Time Two, and 0.89 at Time Three.

The preliminary descriptive statistics for the CDMSE variable are presented in Table 5.11.

Table 5.11: *Descriptive statistics of CDMSE*

| | INTERVENTION GROUP | | CONTROL GROUP | |
|---|---|---|---|---|
| | **Mean** | **Standard Deviation** | **Mean** | **Standard Deviation** |
| **Time One** | 3.73 | 0.49 | 3.71 | 0.53 |
| **Time Two** | 3.97 | 0.45 | 3.75 | 0.47 |
| **Time Three** | 3.85 | 0.48 | 3.72 | 0.48 |

***5.3.1.2 CDMSE: Independent t-tests.*** The independent t-test was used to assess whether there was a statistically significant difference between the control group and the intervention group measurements across each of the time series in respect of the total scores of the CDMSES-SF. The use of a control group is useful in ascribing the improvement to the career intervention programme.  If there was no statistically significant difference between the two group's measurements at Time One, it would indicate that the groups were equivalent in terms of their CDMSE prior to the programme being implemented.   In accordance with the first hypothesis, it would be expected that the intervention group's mean measurement at Time Two would show statistically significant gains in relation to the control group. This would indicate that the career programme had enhanced the CDMSE of the group exposed to the career programme and thereby endorse the first hypothesis as correct in relation to CDMSE.   If the intervention group's measurement at Time Three indicated further statistical gains in relation to the control group, it would be evident that the career programme had elicited further development of CDMSE of the learners eight weeks after the programme had been completed.

Low scores indicate a low level of career CDMSE and high scores indicate high levels of CDMSE.  According to the observed score at Time One for the construct, CDMSE, the intervention group obtained a mean score of 3.73 (SD = .49) and the control group a mean score of 3.71 (SD = .53). Results of independent samples t-tests revealed that the mean difference between the two groups was not statistically significant (t (220) = -0.26; p = .79). These findings

suggest that that the two groups were equivalent in CDMSE before the programme was presented. According to the observed scores at Time Two for the construct CDMSE, the intervention group obtained a mean score of 3.97 (SD = .45) and the control group a mean score of 3.75 (SD = .47). Results of independent samples t-tests indicated that the mean difference was statistically significant (t (220) = -3.52; p = .0001) with a small effect size index (d= 0.47). These findings indicate that the programme had a positive impact on the learners' CDMSE from the intervention group.

At Time Three the intervention group obtained a mean score of 3.85 (SD = .48) and the control group a mean score of 3.72 (SD = .48). The results of an independent samples t-test indicated that the mean difference was statistically significant (t (220) = -2.08; p = .04) with a small effect size index (d = 0.28).  The results indicate that the intervention group's CDMSE was stronger than the control group's CDMSE eight weeks after the programme.

**5.3.1.3 CDMSE: The paired samples t-tests.** A second statistical analysis, the paired samples t-test, was conducted to analyse the data and to further test the first hypothesis.  The statistical procedure examined whether there was a significant difference between the measurements of the intervention group at Time One, Two and Three with respect to the total scores of the CDMSES-SF. The intervention group's mean score at Time One for CDMSE measured 3.73 (SD = .49) while the mean score for Time Two measured 3.97 (SD = .45). The results of the paired samples t-tests revealed that there was a statistically significant increase between the two mean scores (t (110) = -5.43; p = .000) with a medium effect size index (d = 0.52). The results yielded indicate that the programme had an immediate impact on the learners' CDMSE. The intervention group's mean score for CDMSE, at Time Three, measured 3.85 (SD = .48). The results of the paired samples t-tests indicate that there was a statistically significant difference between the Time Two and Three mean scores (t (110) = 3.42; p = .001) with a small effect size index (d = 0.32). These results indicate that there was a significant decrease in the learners' CDMSE eight weeks after the programme was completed. There was also a statistically significant

difference between Time One and Three mean scores (t (110) = -2.50; p = 0.014) with a small effect size index (d = 0.24).  These findings indicate that the career programme had a positive impact on the learners' CDMSE from Time One to Time Three.  Table 5.12 presents the paired sample t-test results for the intervention group's CDMSE.

Table 5.12: *Paired sample t-test results for the intervention group's CDMSE*

| | MEAN | SD | t | p |
|---|---|---|---|---|
| **Time One → Time Two** | 3.73 <br> 3.97 | 0.49 <br> 0.45 | -5.43 | 0.000 |
| **Time One → Time Three** | 3.73 <br> 3.85 | 0.49 <br> 0.48 | -2.50 | 0.014 |
| **Time Two → Time Three** | 3.97 <br> 3.85 | 0.45 <br> 0.48 | 3.42 | 0.001 |

The paired samples t-test was performed to analyse the control group data to examine whether there was a significant difference between the measurements Time One, Two and Three with respect to the total scores of the CDMSES-SF.  As shown in Table 5.13, no statistically significant differences were evident which further endorses the findings of the study, that is, the career development programme enhanced the CDMSE of Grade 11 learners who attended schools with diverse socio-economic backgrounds.

Table 5.13: *Paired sample t-test results for the control group's CDMSE*

|  | MEAN | SD | t | p |
|---|---|---|---|---|
| **Time One → Time Two** | 3.71 <br> 3.75 | 0.53 <br> 0.47 | -1.04 | 0.150 |
| **Time One → Time Three** | 3.71 <br> 3.72 | 0.53 <br> 0.48 | -0.13 | 0.448 |
| **Time Two → Time Three** | 3.75 <br> 3.72 | 0.47 <br> 0.48 | 0.94 | 0.174 |

## 5.4 Second hypothesis

**5.4.1 Results of statistical analysis for academic motivation.** Two separate statistical analyses were conducted to test the second hypothesis which stated that the career development programme would enhance the academic motivation of Grade 11 learners who attended schools with diverse socio-economic backgrounds.

The AMS is based on the assumptions of self-determination theory and expresses motivation through a continuum of increasing self-determination. Three primary positions reflect the degree of autonomy on which behaviours are based, namely, intrinsic motivation, extrinsic motivation and amotivation (Stover et al., 2012).

Intrinsic motivation forms the most autonomous part of the continuum where behaviour or goals are undertaken for the inherent satisfaction rather than for some external consequence. Intrinsic motivation arises out of an innate psychological need for competence and self-determination (Deci & Ryan, 1985). Behaviour is driven by a person's own choice and the activities are actually one of the goals themselves. Intrinsically motivated behaviour is associated with curiosity, exploration and interest (Müller & Louw, 2004). A learner who is intrinsically motivated will typically attend school because he/she is interested and finds satisfaction in learning more. To enhance academic motivation, the career intervention would aim to increase intrinsic motivation as it is

characterised by a high interest in studying and a drive to fulfil personal expectations.  Intrinsic motivation is divided into three subscales on the AMS: Intrinsic Motivation to Know; Intrinsic Motivation to Accomplish; Intrinsic Motivation to Experience Stimulation.

Extrinsic motivation is situated at the midpoint of the continuum where external goals form the primary driving force behind the behaviour.  In other words, behaviour is undertaken to achieve a purpose that is different from the actual behaviour.  A learner will engage in academic pursuits for the purpose of achieving goods marks or avoiding negative consequences.  Essentially, extrinsic motivation has four different subtypes: Integrated Regulation; Identified Regulation (EMID); Introjected Regulation (EMIN); and External Regulation (EMER).  Integrated regulation is the most autonomous form of extrinsic motivation, but was excluded from the AMS as it is only evident in adulthood. The AMS consists, therefore, of three subtypes or subscales representing extrinsic motivation.

**5.4.2 Academic motivation: Reliability.**  Reliability analyses indicated that all seven subscales of the AMS yielded acceptable Cronbach alpha levels.   Table 5.14 provides a summary of the alpha coefficients yielded for this investigation for the AMS seven subscales at Time One, Time Two and Time Three, as well as reliability coefficients for the total scores of the instrument.

Table 5.14: *Cronbach alpha coefficients for AMS*

| SUBSCALES | T1 | T2 | T3 |
|:---:|:---:|:---:|:---:|
| IMTK | 0.82 | 0.86 | 0.88 |
| IMTA | 0.79 | 0.79 | 0.86 |
| IMES | 0.71 | 0.68 | 0.76 |
| EMID | 0.74 | 0.77 | 0.82 |
| EMIN | 0.80 | 0.85 | 0.86 |
| EMER | 0.69 | 0.74 | 0.77 |
| AMOT | 0.76 | 0.84 | 0.81 |
| **TOTAL** | **0.91** | **0.91** | **0.93** |

The preliminary descriptive statistics for the academic motivation variable are reported in Table 5.15.

**5.4.3 Academic motivation: Independent t-tests.** The second hypothesis, which stated that the career development programme would enhance the academic motivation of Grade 11 learners, was examined by conducting an independent samples t-test to analyse whether there was a statistically significant difference between the control group and the intervention group measurements taken at Time One, Two and Three with regard to the seven subscales of the AMS.

When performing multiple tests, the family-wise error rate is the probability of making one or more Type I errors, meaning that a difference will be reported when there is not one. Using the 5% significance level for <u>each test</u> will result in a higher (than 5%) family-wise error rate. To correct for this, the Bonferroni adjustment is used where the significance level (5% or 0.05) is divided by the number of tests. Therefore, in the case of the AMS, where there are seven subscales, the p-value should be compared to 0.05/7 = 0.007, that is, statistical significance is found when the p-value < 0.007.

Table 5.15: *Descriptive statistics of Academic Motivation*

| | | INTERVENTION GROUP | | CONTROL GROUP | |
|---|---|---|---|---|---|
| | | **Mean** | **Standard Deviation** | **Mean** | **Standard Deviation** |
| **TIME ONE** | **IMTK** | 5.50 | 1.07 | 5.44 | 1.15 |
| | **IMTA** | 5.16 | 1.20 | 5.08 | 1.27 |
| | **IMES** | 4.31 | 1.28 | 4.28 | 1.22 |
| | **EMID** | 6.19 | 0.97 | 6.24 | 0.83 |
| | **EMIN** | 5.61 | 1.35 | 5.77 | 1.28 |
| | **EMER** | 6.06 | 1.16 | 6.26 | 0.84 |
| | **AMOT** | 1.50 | 0.86 | 1.73 | 1.09 |
| **TIME TWO** | **IMTK** | 5.58 | 1.12 | 5.24 | 1.13 |
| | **IMTA** | 5.25 | 1.18 | 4.81 | 1.09 |
| | **IMES** | 4.34 | 1.21 | 4.00 | 1.18 |
| | **EMID** | 6.16 | 0.94 | 5.81 | 1.04 |
| | **EMIN** | 5.60 | 1.35 | 5.67 | 1.36 |
| | **EMER** | 5.82 | 1.29 | 6.07 | 0.94 |
| | **AMOT** | 1.53 | 1.03 | 1.90 | 1.25 |
| **TIME THREE** | **IMTK** | 5.35 | 1.22 | 5.14 | 1.20 |
| | **IMTA** | 5.07 | 1.30 | 4.86 | 1.17 |
| | **IMES** | 4.23 | 1.36 | 4.14 | 1.15 |
| | **EMID** | 5.92 | 1.13 | 5.84 | 0.96 |
| | **EMIN** | 5.37 | 1.38 | 5.52 | 1.28 |
| | **EMER** | 5.75 | 1.22 | 6.06 | 0.84 |
| | **AMOT** | 1.65 | 1.16 | 1.78 | 1.06 |

Intrinsic Motivation to Know (IMTK) Subscale: IMTK refers to a person's orientation towards knowledge and tasks are carried out for the pleasure of learning.  According to the observed score at Time One for the subscale, IMTK, the intervention group (M = 5.50; SD = 1.07) and the control group (M = 5.44; SD = 1.15) did not differ significantly from each other (t (220) = -0.44; p = .33). These results suggest that the two groups were equivalent in IMTK before the programme was presented. The independent samples t-test revealed for Time

Two that the intervention group (M = 5.58; SD = 1.12) and the control group (M = 5.24; SD = 1.13) differed significantly (t (220) = -2.25; p = .001) with a small effect size index (d = 0.30). The significant gains showed by the intervention group indicated that the programme enhanced the learners' orientation to learn for pleasure.  According to the observed scores at Time Three for the subscale, IMTK, the intervention group (M = 5.35; SD = 1.22) and the control group (M = 5.14. SD = 1.20) did not differ significantly (t (220) = -1.33; p = .09). These results suggest that the programme did not have a long-term effect on the learners' IMTK.

Intrinsic Motivation to Accomplish (IMTA) Subscale: IMTA refers to a person's drive towards achievement, the satisfaction which he/she gains when products are generated, and/or when personal limits are overcome.  According to the observed scores at Time One for the subscale, IMTA, the intervention group (M = 5.16; SD = 1.20) and the control group (M = 5.08; SD = 1.27) did not differ (t (220) = -0.45; p = .33). The results indicate that the two groups were equivalent in IMTA prior to the programme. According to the observed scores at Time Two for the subscale, IMTA, the intervention group (M = 5.25; SD = 1.18) scored statistically significantly higher (t (220) = -2.89; p = .0002) than the control group (M = 4.81; SD = 1.09) with a small effect size index (d = 0.39). These results suggest that the programme had an impact on the learners' IMTA. Again a long term effect on learners' IMTA was not indicated as the scores at Time Three for the intervention group (M = 5.07; SD = 1.30) and the control group (M = 4.86; SD = 1.17) did not differ significantly (t (220) = -1.26; p = .10).

Intrinsic Motivation to Experience Stimulation (IMES) Subscale: IMES refers to a person's orientation towards stimulating experiences and involves activities developed to perceive comforting aesthetics, intellectual or sensorial sensations. According to the observed score at Time One for the subscale, IMES, the intervention group (M = 4.40; SD = 1.28) and the control group (M = 4.28; SD = 1.22) did not differ significantly (t (220) = -0.19; p = .43). These results indicate

that the two groups were equivalent in IMES before the programme was presented. According to the observed scores at Time Two for the subscale, IMES, the intervention group (M = 4.34; SD = 1.21) and the control group (M = 4.00; SD = 1.18) revealed no statistically significant differences (t (220) = -2.06; p = .02), suggesting that the career intervention did not enhance IMES. There were no significant differences (t = -0.52; p = .30; df = 220) at Time Three between the intervention group (M = 4.23; SD = 1.36) and the control group (M = 4.14; SD = 1.15) indicating that the career programme did not have a long-term effect on IMES.

Identified Regulation (EMID) Subscale: EMID is the most autonomous, more self-determined form of extrinsic motivation represented on the AMS.  A goal or behaviour is consciously valued and the action or behaviour occurs because it is accepted as personally important. According to the observed scores at Time One for the subscale, EMID, the intervention group (M = 6.19; SD = 0.97) and the control group (M = 6.24; SD = 0.83) did not differ (t (220) = 0.39; p = .35). The results indicate that the two groups were equivalent in EMID prior to the programme. According to the observed scores at Time Two for the subscale, IMTA, the intervention group (M = 6.16; SD = 0.94) scored significantly higher (t (220) = -2.62; p = .0004) than the control group (M = 5.81; SD = 1.04) with a small effect size index (d = 0.35). These results suggest that the programme had an impact on the learners' EMID; however, a long term effect on learners' EMID was not observed as the scores at Time Three for the intervention group (M = 5.92; SD = 1.13) and the control group (M = 5.84; SD = 0.96) did not differ significantly (t (220) = -0.58; p = .28).

Introjected Regulation (EMIN) Subscale: EMIN refers to the drive to bolster internal contingencies like self-worth and the behaviour is driven by a sense of guilt or obligation.  While internally driven, this behaviour is based on externally perceived locus of control and not perceived as part of self.  According to the observed score at Time One for the subscale, EMIN, the intervention group (M =

5.61; SD = 1.35) and the control group (M = 5.77; SD = 1.28) did not differ significantly from each other (t (220) = 0.90; p = .19). Thus, based on the pre-test scores, these results suggest an initial equivalence between the two groups in EMIN. The independent samples t-test revealed for Time Two that the intervention group (M = 5.60; SD = 1.35) and the control group (M = 5.67; SD = 1.36) did not differ significantly (t (220) = 0.38; p = .35). These results indicate that the programme did not enhance EMIN. According to the observed scores at Time Three for the subscale, EMIN, the intervention group (M = 5.37; SD = 1.38) and the control group (M = 5.52; SD = 1.28) still did not differ significantly (t (220) = 0.87; p = 0.19). These results suggest that the programme did not have a long-term effect on learners' EMIN.

External Regulation (EMER) Subscale:  EMER refers to the least self-determined and autonomous form of motivation.  Behaviour is performed because of external demand or possible reward. A learner might study the night before an examination because he/she feels forced by his/her parents. Additionally, if a learner studies hard to achieve in an examination because of the promise of a reward such as money, then the motive behind studying is not what it was intended to do, that is, obtain knowledge.  Using extrinsic motivation to complete a task can decrease intrinsic motivation.  This study intended to decrease this form of motivation where the student learns in order to satisfy external expectations, rewards, and demands.  According to the observed score at Time One for the subscale, EMER, the intervention group (M = 6.06; SD = 1.16) and the control group (M = 6.26; SD = .84) did not show differences (t (220) = 1.51; p = .07). These results indicated that the two groups were equivalent in EMER before the programme was presented. According to the observed scores at Time Two for the subscale, EMER, no significant differences appeared (t (220) = 1.66; p = .05) between the intervention group (M = 5.82; SD = 1.29) and the control group (M = 6.07; SD = .94), with the control group showing higher scores for EMER.  According to the observed scores at Time Three for the subscale, EMER, the intervention group (M = 5.75; SD = 1.22) and the control group scores

(M = 6.06; SD = .84), were not statistically significantly different (t (220) = 2.21; p = .01).

Amotivation (AMOT) Subscale: AMOT represents a person who shows a lack of motivation in that he/she perceives a lack of control over events, feels personal incompetence and absence of purpose.  This study aimed to decrease AMOT. According to the observed score at Time One for the subscale, AMOT, the intervention group (M = 1.50; SD = .86) and the control group (M = 1.73; SD = 1.09) did not differ significantly (t (220) = 1.75; p = .04). These results indicate that the two groups were equivalent in amotivation before the programme was presented.  The intervention group at Time Two (M = 1.53; SD = 1.03) showed no statistically significant difference (t (220) = 2.42; p = .008) to the control group (M = 1.90; SD = 1.25). There were no significant differences (t = 0.92; p = .18; df = 220) at Time Three between the intervention group (M = 1.65; SD = 1.16) and the control group (M = 1.78; SD = 1.06).

The results indicate that the intervention group and the control group in this study were equivalent with regard to the seven subscale measures of the Academic Motivation Scale before the programme was presented.  Furthermore, the findings suggest that the career intervention programme enhanced the intervention groups' intrinsic motivation, more specifically, Intrinsic Motivation to Know and Intrinsic Motivation to Accomplish.  The results also indicate that the career development programme enhanced the intervention groups' Extrinsic Motivation Identified Regulation which is the most autonomous, more self-determined form of extrinsic motivation represented on the AMS.  There were no statistically significant gains made by the control group for all seven subscales of the Academic Motivation Scale.

Intrinsic Motivation is viewed as the more autonomous academic motivation. It is intrinsic, self-determined motivation that most powerfully predicts positive school-related engagement and success (Hardré & Reeve, 2003). These results lend partial support to the second hypothesis.  It is noted, however,

that the strengthening in motivation made by the intervention group did not sustain for eight weeks after the completion of the programme.

Table 5.16 provides a summary of the findings of the independent t-tests conducted on the Academic Motivation Scale measurements taken from the intervention group and the control group.

Table 5.16: *Summary of independent t-tests on the AMS measurements for the intervention group and the control group*

|  |  | INTERVENTION | | CONTROL | | t | P |
|---|---|---|---|---|---|---|---|
|  |  | Mean | SD | Mean | SD | | |
| TIME ONE | IMTK | 5.50 | 1.07 | 5.44 | 1.15 | -0.44 | .33 |
|  | IMTA | 5.16 | 1.20 | 5.08 | 1.27 | -0.45 | .33 |
|  | IMES | 4.31 | 1.28 | 4.28 | 1.22 | -0.19 | .43 |
|  | EMID | 6.19 | 0.97 | 6.24 | 0.83 | 0.39 | .35 |
|  | EMIN | 5.61 | 1.35 | 5.77 | 1.28 | 0.90 | .19 |
|  | EMER | 6.06 | 1.16 | 6.26 | 0.84 | 1.51 | .07 |
|  | AMOT | 1.50 | 0.86 | 1.73 | 1.09 | 1.75 | .04 |
| TIME TWO | IMTK | <u>5.58</u> | <u>1.12</u> | <u>5.24</u> | <u>1.13</u> | <u>-2.25</u> | <u>.001</u> |
|  | IMTA | <u>5.25</u> | <u>1.18</u> | <u>4.81</u> | <u>1.09</u> | <u>-2.89</u> | <u>.0002</u> |
|  | IMES | 4.34 | 1.21 | 4.00 | 1.18 | -2.06 | .02 |
|  | EMID | <u>6.16</u> | <u>0.94</u> | <u>5.81</u> | <u>1.04</u> | <u>-2.62</u> | <u>.0004</u> |
|  | EMIN | 5.60 | 1.35 | 5.67 | 1.36 | 0.38 | .35 |
|  | EMER | 5.82 | 1.29 | 6.07 | 0.94 | 1.66 | .05 |
|  | AMOT | 1.53 | 1.03 | 1.90 | 1.25 | 2.42 | .008 |
| TIME THREE | IMTK | 5.35 | 1.22 | 5.14 | 1.20 | -1.33 | .09 |
|  | IMTA | 5.07 | 1.30 | 4.86 | 1.17 | -1.26 | .10 |
|  | IMES | 4.23 | 1.36 | 4.14 | 1.15 | -0.52 | .30 |
|  | EMID | 5.92 | 1.13 | 5.84 | 0.96 | -0.58 | .28 |
|  | EMIN | 5.37 | 1.38 | 5.52 | 1.28 | 0.87 | .19 |
|  | EMER | 5.75 | 1.22 | 6.06 | 0.84 | 2.21 | .01 |
|  | AMOT | 1.65 | 1.16 | 1.78 | 1.06 | 0.92 | .18 |

Note:  All underlined scores are statistically significant.

**5.4.4 Academic motivation: The repeated measures MANOVA.** A second set of statistical analyses were conducted to further test the second hypothesis. A repeated measures MANOVA was performed on the variable, academic motivation, in order to establish whether there is a statistically significant difference between the intervention and control groups in respect of the seven subscales of the Academic Motivation Scale (AMS) combined in respect of the difference between Time One, Time Two and Time Three.

Table 5.17 presents the results of the repeated measures MANOVA which indicates that there is a significant interaction effect and that the two groups scored differently over time on the seven subscales of the AMS.

Table 5.17: *Repeated Measures MANOVA for the intervention group and the control group of the seven subscales of the Academic Motivation Scale*

|  | TEST | VALUE | F | EFFECT df | ERROR df | p |
|---|---|---|---|---|---|---|
| **Intercept** | Wilks | 0.01 | 3100.59 | 7 | 214 | 0.000 |
| **Group** | Wilks | 0.92 | 2.50 | 7 | 214 | 0.017 |
| **TIME** | Wilks | 0.79 | 3.98 | 14 | 207 | 0.000 |
| **TIME*Group** | Wilks | 0.89 | 1.89 | 14 | 207 | 0.029 |

Note: All underlined scores are statistically significant.

Given that the results of the repeated measures MANOVA indicated statistically significant main effects, repeated measures ANOVA's was performed in order to establish which of the subscales contributed to the statistical significance of the combined measure.

Intrinsic Motivation to Know (IMTK): IMTK relates to performing an activity for the pleasure and the satisfaction that one experiences while learning or trying to understand something. Table 5.18 provides the results of the repeated measures ANOVA for the IMTK subscale of the AMS for the intervention group and the

control group at Time One, Time Two and Time Three. Figure 5.5 graphically depicts the IMTK measurements of the intervention group and control group.

Table 5.18: *Repeated measures ANOVA for the intervention group and the control group for the IMTK subscale of the Academic Motivation Scale*

| | SUM OF SQUARES | df | MEAN SUM OF SQUARES | F | P |
|---|---|---|---|---|---|
| **Intercept** | <u>19233.095</u> | <u>1</u> | <u>19233.090</u> | <u>6028.123</u> | <u>0.000</u> |
| **Group** | 7.149 | 1 | 7.149 | 2.240 | 0.136 |
| **TIME** | <u>6.093</u> | <u>2</u> | <u>3.046</u> | <u>7.720</u> | <u>0.001</u> |
| **TIME*Group** | 2.102 | 2 | 1.050 | 2.663 | 0.071 |
| **Error** | 173.64 | 440 | 0.395 | | |

Note:  All underlined scores are statistically significant.
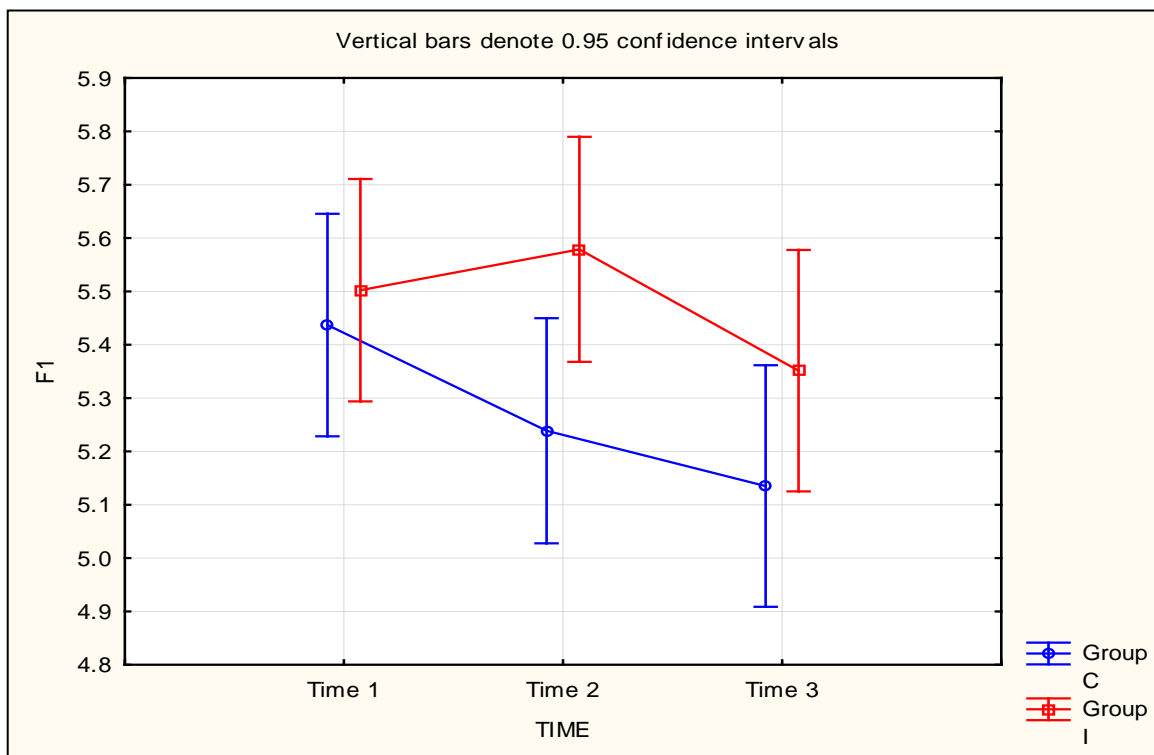


*Figure 5.5:* IMTK measurements of the intervention group and control group

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The findings from the repeated measures ANOVA indicate that there is a significant difference in the trend across time for the IMTK subscale. Because there is no significant interaction effect between group and time, the trend across time was the same for both groups.

Intrinsic Motivation to Accomplish (IMTA): IMTA involves engaging in an activity for the pleasure and satisfaction experienced when a person attempts to accomplish something. Table 5.19 provides the results of the repeated measures ANOVA for the IMTA subscale of the AMS for the intervention group and the control group at Time One, Time Two and Time Three. Figure 5.6 graphically depicts the IMTA measurements of the intervention group and control group.

Table 5.19: *Repeated measures ANOVA for the intervention group and the control group of the IMTA subscale of the Academic Motivation Scale*

|  | SUM OF SQUARES | df | MEAN SUM OF SQUARES | F | p |
|---|---|---|---|---|---|
| **Intercept** | 16900.938 | 1 | 16900.940 | 4900.718 | 0.000 |
| **Group** | 9.730 | 1 | 9.730 | 2.821 | 0.094 |
| **TIME** | 2.564 | 2 | 1.282 | 2.862 | 0.058 |
| **TIME*Group** | 3.827 | 2 | 1.913 | 4.271 | 0.015 |
| **Error** | 197.109 | 440 | 0.448 |  |  |

Note: All underlined scores are statistically significant.
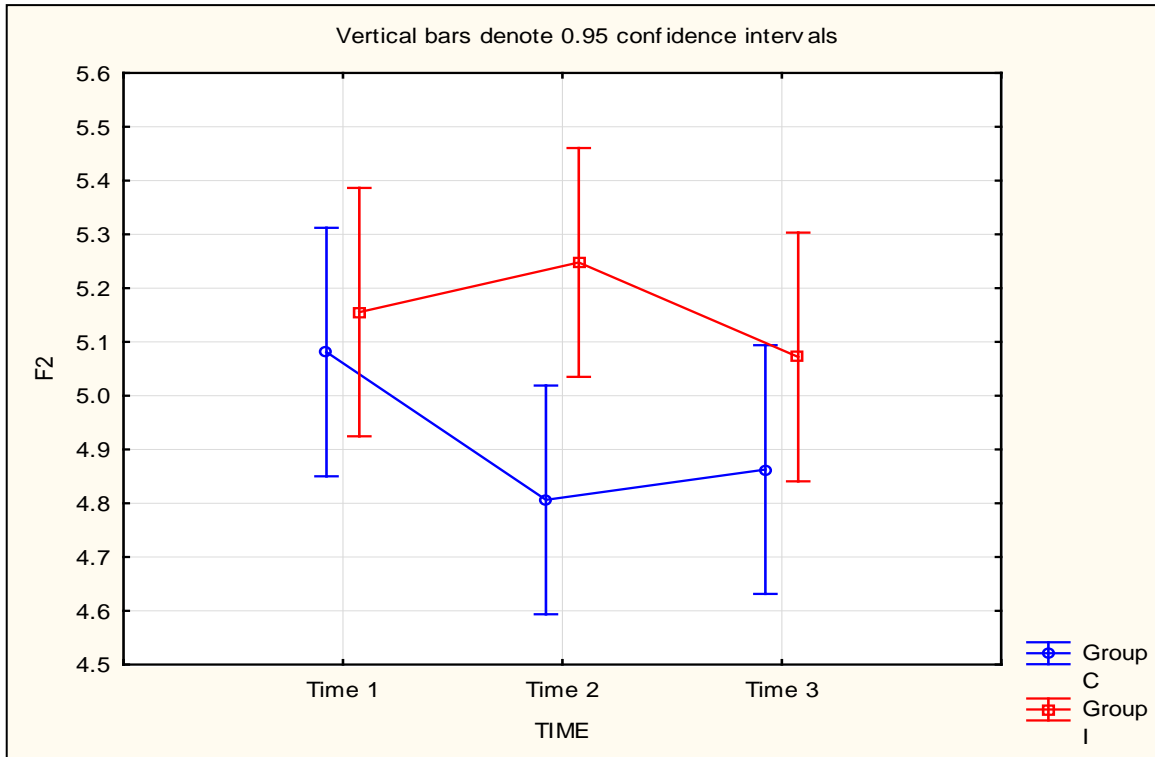
*Figure 5.6*: IMTA measurements of the intervention group and control group

The results yielded from the repeated measures ANOVA for the IMTA subscale indicate that there is a significant interaction effect between group and time for the IMTA subscale.

Intrinsic Motivation Experience Stimulation (IMES): IMES represents behaviour that occurs when someone is engaging in an activity in order to experience stimulating sensations.  Table 5.20 reflects the results of the repeated measures ANOVA for the IMES subscale of the AMS for the intervention group and the control group at Time One, Time Two and Time Three. Figure 5.7 graphically depicts the IMES measurements of the intervention group and control group.

Table 5.20: *Repeated measures ANOVA for the intervention group and the control group of the IMES subscale of the Academic Motivation Scale*

|  | SUM OF SQUARES | df | MEAN SUM OF SQUARES | F | p |
|---|---|---|---|---|---|
| **Intercept** | <u>11834.920</u> | <u>1</u> | <u>11834.920</u> | <u>3331.852</u> | <u>0.000</u> |
| **Group** | 3.754 | 1 | 3.754 | 1.057 | 0.305 |
| **TIME** | 2.123 | 2 | 1.061 | 2.056 | 0.129 |
| **TIME*Group** | 2.813 | 2 | 1.407 | 2.724 | 0.067 |
| **Error** | 227.189 | 440 | 0.516 | | |

Note:  All underlined scores are statistically significant.
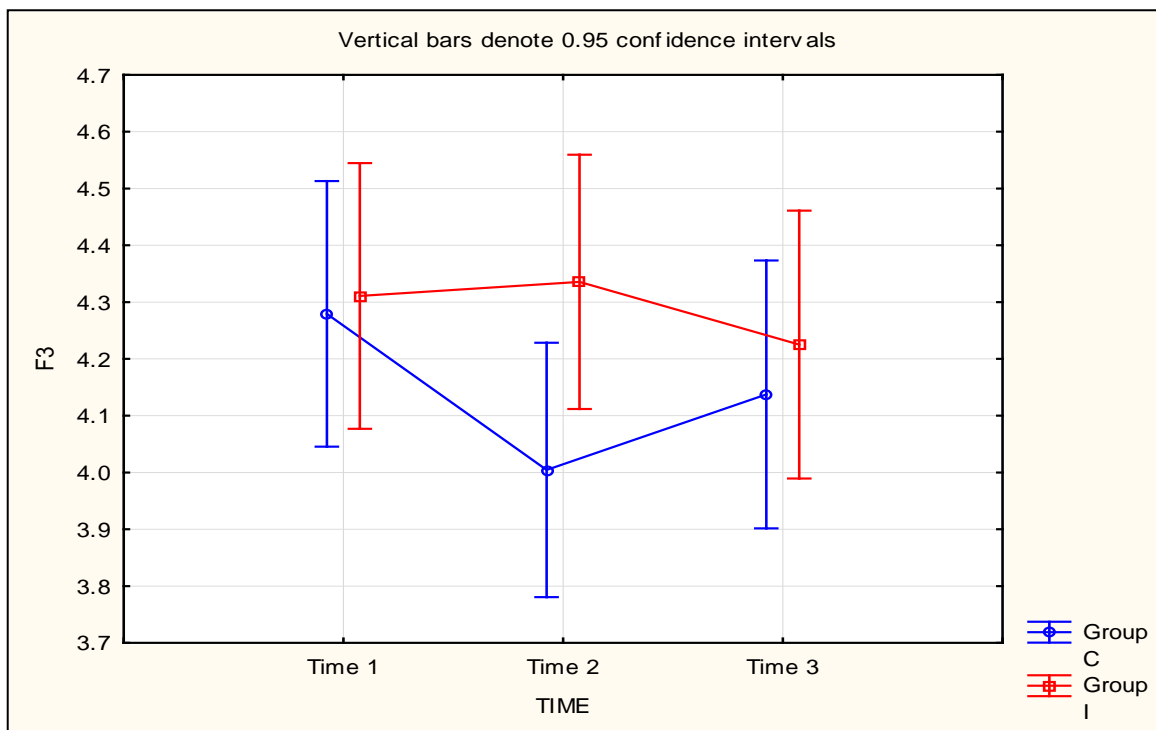


*Figure 5.7*: IMES measurements of the intervention group and control group

The repeated measures ANOVA generated results which indicate that there are no significant main effects for group and time and also no significant interaction effect between group and time for the IMES subscale.

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<u>Identified Regulation (EMID)</u>: EMID relates to a person valuing and judging a behaviour as important and therefore performing it out of choice. Table 5.21 provides the results of the repeated measures ANOVA for the EMID subscale of the AMS for the intervention group and the control group at Time One, Time Two and Time Three. Figure 5.8 graphically depicts the EMID measurements of the intervention group and control group.

Table 5.21: Repeated measures *ANOVA for the intervention group and the control group of the EMID subscale of the Academic Motivation Scale*

| | SUM OF SQUARES | df | MEAN SUM OF SQUARES | F | p |
|---|---|---|---|---|---|
| **Intercept** | <u>24180.430</u> | <u>1</u> | <u>24180.430</u> | <u>11178.280</u> | <u>0.000</u> |
| **Group** | 2.712 | 1 | 2.712 | 1.254 | 0.264 |
| **TIME** | <u>13. 184</u> | <u>2</u> | <u>6.592</u> | <u>18.003</u> | <u>0.000</u> |
| **TIME*Group** | <u>4.541</u> | <u>2</u> | <u>2.270</u> | <u>6.201</u> | <u>0.002</u> |
| **Error** | 161.109 | 440 | 0.366 | | |

Note:  All underlined scores are statistically significant.
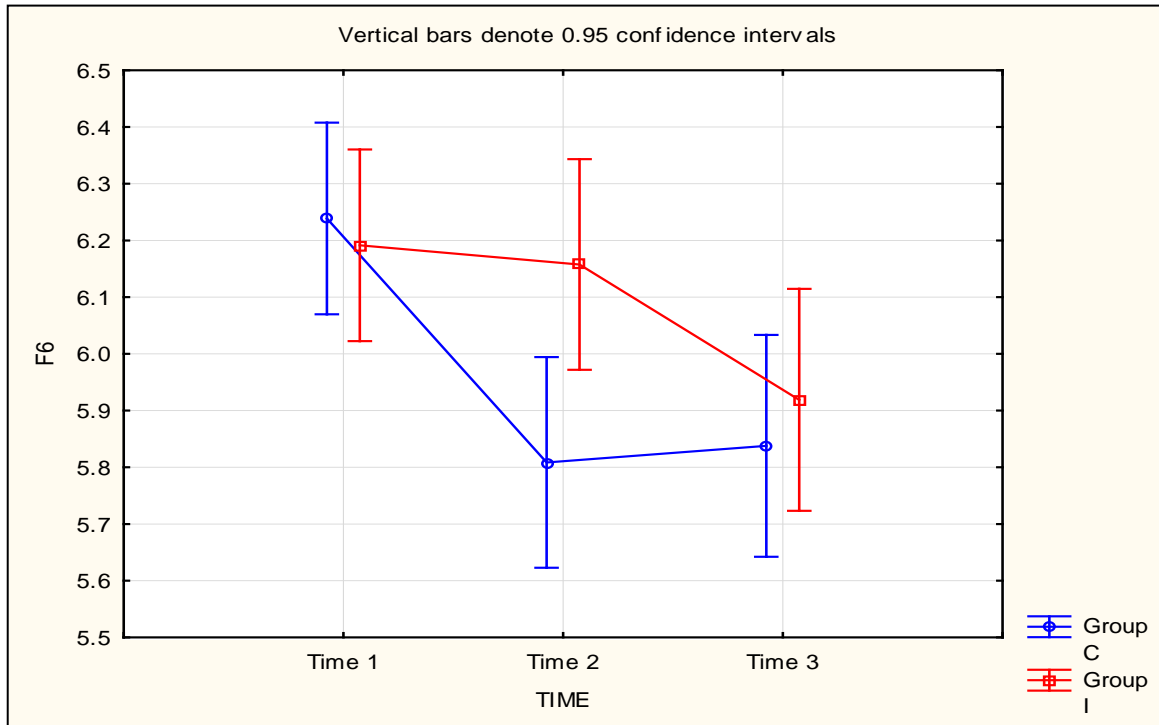
*Figure 5.8*: EMID measurements of the intervention group and control group

The findings from the repeated measures ANOVA indicate that there is a significant difference in the trend across time, as well as a significant interaction effect between group and time for the EMID subscale. This indicates that the trend across time was not the same for the two groups.

Introjected Regulation (EMIN):  EMIN is reinforced through internal pressures, for example, guilt or anxiety.  Table 5.22 presents the results of the ANOVA for the EMIN subscale of the AMS for the intervention group and the control group at Time One, Time Two and Time Three. Figure 5.9 graphically depicts the EMIN measurements of the intervention group and control group.

Table 5.22: *Repeated measures ANOVA for the intervention group and the control group of the EMIN subscale of the Academic Motivation Scale*

| | SUM OF SQUARES | df | MEAN SUM OF SQUARES | F | p |
|---|---|---|---|---|---|
| **Intercept** | <u>20811.905</u> | <u>1</u> | <u>20811.905</u> | <u>4788.270</u> | <u>0.000</u> |
| **Group** | 2.712 | 1 | 2.712 | 0.624 | 0.430 |
| **TIME** | <u>7.288</u> | <u>2</u> | <u>3.644</u> | <u>7.380</u> | <u>0.007</u> |
| **TIME*Group** | 0.278 | 2 | 0.139 | 0.282 | 0.755 |
| **Error** | 217.226 | 440 | 0.494 | | |

Note:  All underlined scores are statistically significant.
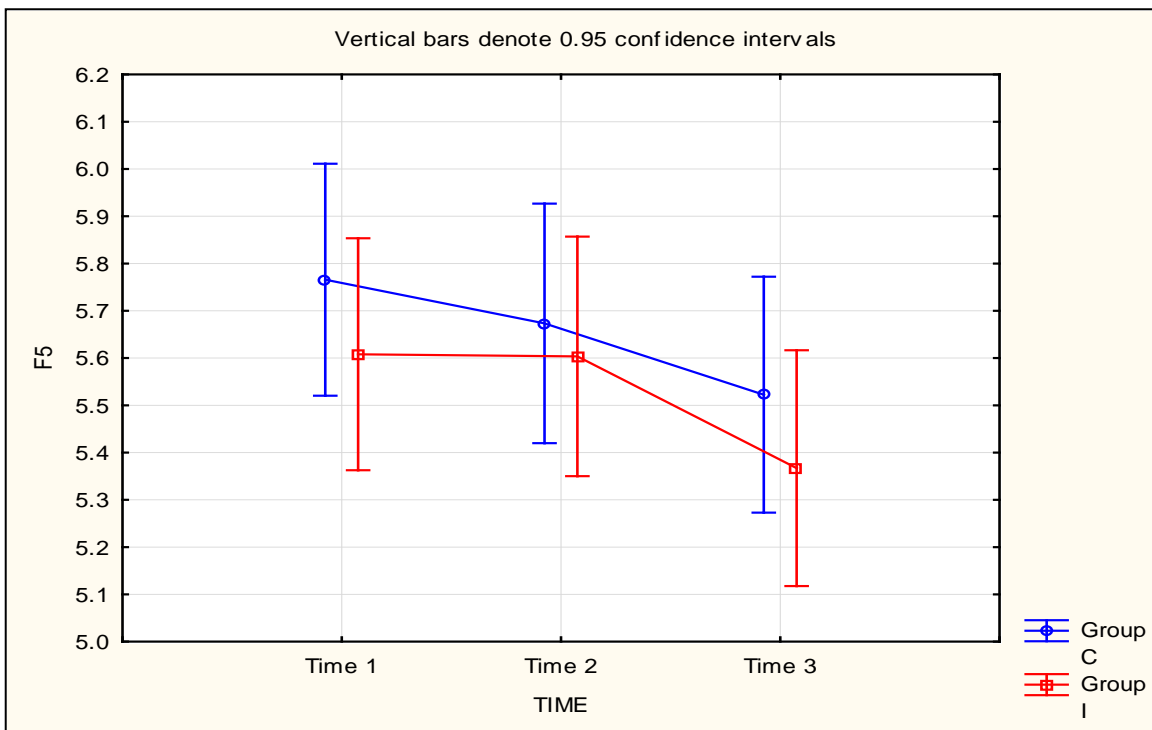


*Figure 5.9:* EMIN measurements of the intervention group and control group

The repeated measures ANOVA generated results which indicate that there is a significant main effect for time for the IMES subscale.  This indicates that there are significant time differences, but because there is no significant interaction effect between group and time, the trend across time was the same for both groups.

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<u>External Regulation (EMER)</u>: EMER refers to behaviour that is controlled by external sources, such as material rewards or constraints imposed by others. Table 5.23 reflects the results of the repeated measures ANOVA for the EMER subscale of the AMS for the intervention group and the control group at Time One, Time Two and Time Three. Figure 5.10 graphically depicts the EMER measurements of the intervention group and control group.

Table 5.23: *Repeated measures ANOVA for the intervention group and the control group for the EMER subscale of the Academic Motivation Scale*

|  | SUM OF SQUARES | df | MEAN SUM OF SQUARES | F | p |
|---|---|---|---|---|---|
| **Intercept** | <u>23997.005</u> | <u>1</u> | <u>23997.005</u> | <u>9318.885</u> | <u>0.000</u> |
| **Group** | <u>10.912</u> | <u>1</u> | <u>10.912</u> | <u>4.238</u> | <u>0.041</u> |
| **TIME** | <u>8.581</u> | <u>2</u> | <u>4.291</u> | <u>10.453</u> | <u>0.000</u> |
| **TIME*Group** | 0.312 | 2 | 0.156 | 0.380 | 0.684 |
| **Error** | 180.601 | 440 | 0.410 |  |  |

Note:  All underlined scores are statistically significant.
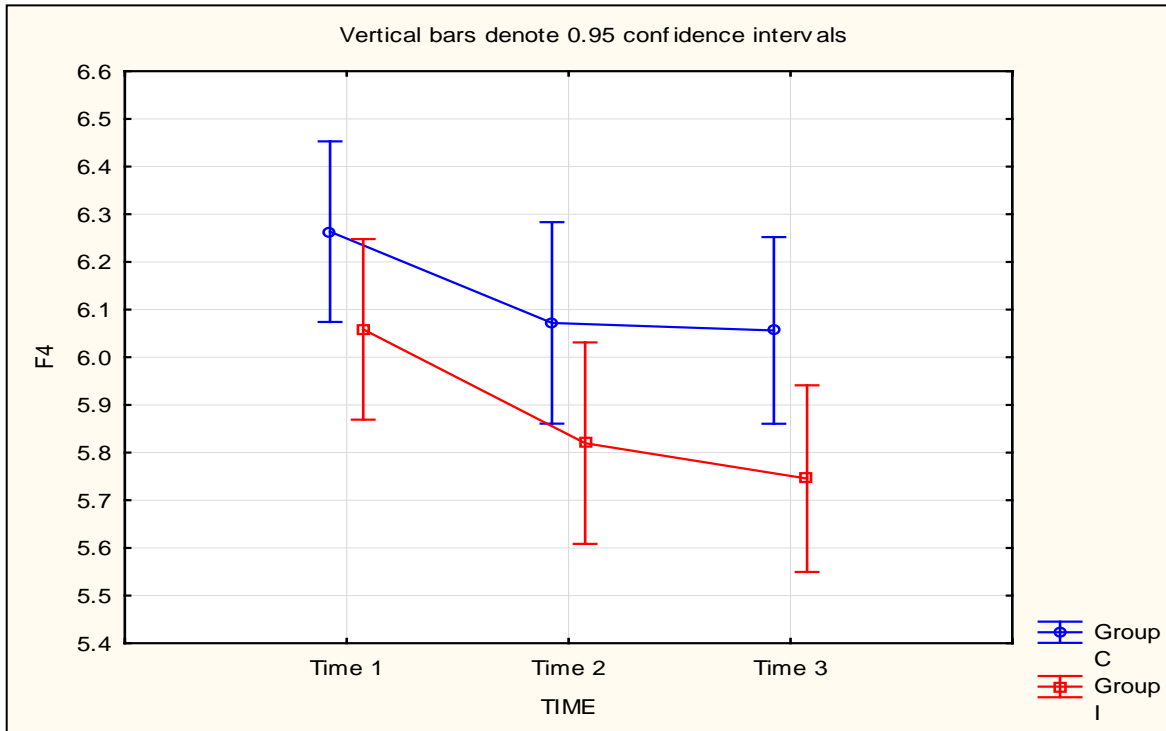
*Figure 5.10:* EMER measurements of the intervention group and control group

The findings from the repeated measures ANOVA indicate that there is a significant main effect for group as well as a significant main effect for time.  This indicates that there is a significant difference between the groups irrespective of time, as well as a significant change over time irrespective of group for the EMER subscale.  Because there is no significant interaction effect between group and time, the trend across time was the same for both groups.

Amotivation (AMOT): AMOT is characterised by feelings of incompetence and typifies diminished motivation.  Table 5.24 presents the results of the repeated measures ANOVA for the AMOT subscale of the AMS for the intervention group and the control group at Time One, Time Two and Time Three. Figure 5.11 graphically depicts the AMOT measurements of the intervention group and control group.

Table 5.24: *Repeated measures ANOVA for the intervention group and the control group of the AMOT subscale of the Academic Motivation Scale*

| | SUM OF SQUARES | df | MEAN SUM OF SQUARES | F | p |
|---|---|---|---|---|---|
| **Intercept** | <u>1880.122</u> | <u>1</u> | <u>1880.122</u> | <u>710.151</u> | <u>0.000</u> |
| **Group** | 10.096 | 1 | 10.096 | 3.183 | 0.052 |
| **TIME** | 1.521 | 2 | 0.760 | 1.787 | 0.169 |
| **TIME*Group** | 1.545 | 2 | 0.773 | 1.815 | 0.164 |
| **Error** | 187.267 | 440 | 0.426 | | |

Note:  All underlined scores are statistically significant.
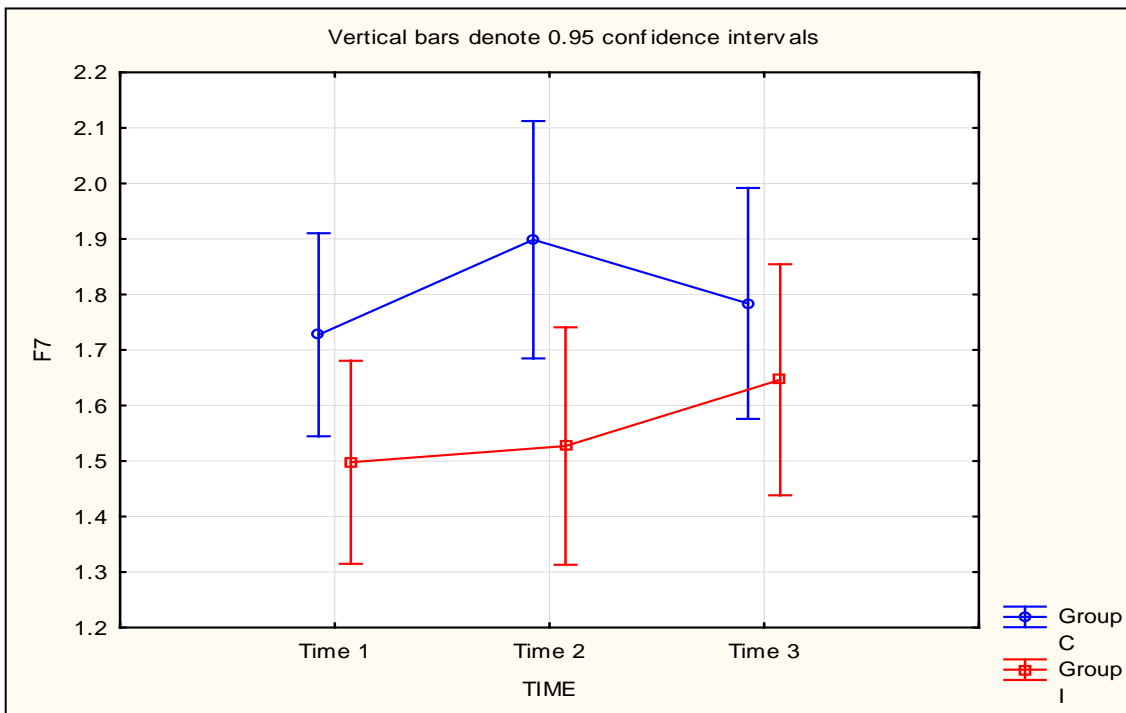


*Figure 5.11*: AMOT measurements of the intervention group and control group

The results of the repeated measures ANOVA indicate no significant main effects for group and time and also not significant interaction effect for AMOT subscale.

In summary, from the results provided in Table 5.18 to Table 5.24, it can be seen that there are statistically significant differences in the following subscales:  IMTK subscale (time only); IMTA subscale (interaction only); EMID

subscale (time and the interaction); EMIN subscale (time only); and EMER subscale (group and time).

Following the results of the ANOVA tests, post hoc tests were performed to determine where the specific significant differences were located.

IMTK subscale: Table 5.25 presents the results of the Tukey HSD test for IMTK subscale showing significant time effect.

Table 5.25: *Tukey HSD test for IMTK subscale*

| TIME | TIME ONE | TIME TWO | TIME THREE |
|---|---|---|---|
| **Means** | **5.47** | **5.41** | **5.24** |
| **Time One** | - | - | - |
| **Time Two** | 0.5643 | - | - |
| **Time Three** | <u>0.0004</u> | <u>0.0152</u> | - |

Note:  p < 0.05 and all underlined scores are statistically significant.

The main effect of time for the IMTK subscale of both intervention and control groups combined yielded a significant F ratio $F_{(2,440)} = 7.72$, $p = 0.001$, (see Table 5.18).  The Tukey HSD test indicated that the mean change score significantly decreased from Time One to Time Three as well as from Time Two to Time Three.

These results seem to indicate a general decline in IMTK for the entire group of participants over the period of the study measurements.

IMTA subscale: Table 5.26 presents the results of the Tukey HSD test for IMTA subscale showing significant interaction effect.

Table 5.26: *Tukey HSD test for IMTA subscale*

| GROUP | TIME | CONTROL | | | INTERVENTION | | |
|---|---|---|---|---|---|---|---|
| | | T1 | T2 | T3 | T1 | T2 | T3 |
| **Means** | | 5.08 | 4.81 | 4.86 | 5.16 | 5.25 | 5.07 |
| **Control** | **T1** | - | - | - | - | - | - |
| | **T2** | <u>0.0270</u> | - | - | - | - | - |
| | **T3** | 0.1453 | 0.9891 | - | - | - | - |
| **Intervention** | **T1** | 0.9974 | 0.2562 | 0.4575 | - | - | - |
| | **T2** | 0.9074 | 0.0689 | 0.1617 | 0.9087 | - | - |
| | **T3** | 1.0000 | 0.5683 | 0.7870 | 0.9395 | 0.3684 | - |

Note:  p < 0.05 and all underlined scores are statistically significant

According to the Tukey HSD test for the IMTA subscale, the interaction effect of the control group was significant $F_{(2,440)} = 4.27$, $p = 0.014$, indicating a decrease in IMTA from Time One to Time Two.

The results yielded seem to suggest that the learners from the control group experienced a significant decrease in IMTA during the time their peers in the intervention group were participating in the career programme.

EMID subscale: Table 5.27 presents the results of the Tukey HSD test for EMID subscale demonstrating significant time effect and Table 5.28 shows the results of the Tukey HSD for EMID subscale indicating the significant interaction effect.

Table 5.27: *Tukey HSD test for EMID subscale (time effect)*

| TIME | Time One | Time Two | Time Three |
|---|---|---|---|
| **Means** | **6.22** | **5.98** | **5.88** |
| **Time One** | - | - | - |
| **Time Two** | <u>0.0002</u> | - | - |
| **Time Three** | <u>0.0000</u> | 0.1619 | - |

Note:  p < 0.05 and all underlined scores are statistically significant


Table 5.28: *Tukey HSD test for EMID subscale (interaction effect)*

| | | CONTROL | | | INTERVENTION | | |
|---|---|---|---|---|---|---|---|
| **GROUP** | **TIME** | **T1** | **T2** | **T3** | **T1** | **T2** | **T3** |
| **Means** | | 6.24 | 5.81 | 5.84 | 6.19 | 6.16 | 5.92 |
| **Control** | **T1** | - | - | - | - | - | - |
| | **T2** | <u>0.0000</u> | - | - | - | - | - |
| | **T3** | <u>0.0000</u> | 0.9992 | - | - | - | - |
| **Intervention** | **T1** | 0.9992 | <u>0.0429</u> | 0.0789 | - | - | - |
| | **T2** | 0.9900 | 0.0862 | 0.1475 | 0.9984 | - | - |
| | **T3** | 0.1475 | 0.9607 | 0.9900 | <u>0.0103</u> | <u>0.0387</u> | - |

Note:  p < 0.05 and all underlined scores are statistically significant


The main effect of time for the EMID subscale of both intervention and control groups combined yielded a significant F ratio $F(2,440) = 18.00$, p = 0.000, (see Table 5.21).  The Tukey HSD test indicated that the mean change score significantly decreased from Time One to Time Two as well as from Time One to Time Three.  The interaction effect between group and time for the EMID subscale was also significant with $F(2, 440) = 6.20$, p = .002.  The Tukey HSD test indicated that for the control group there was significant decreases in EMID mean score from Time One to Time Two and also from Time One to Time Three,

but not from Time Two to Time Three. The Tukey HSD test indicated that for the intervention group there was no significant difference between Time One and Time Two (unlike the control group), but there was a significant decrease from Time One to Time Three and also from Time Two to Time Three (unlike the control group). For more clarification see Figure 5.8.

These results suggest that the learners from the control group experienced a decrease in EMID while their peers in the intervention group were participating in the career programme which continued for the duration of the study's measurements.  The statistical analyses also seems to show a significant decrease in the intervention group's EMID for the duration of the study's measurements, including the eight weeks after the programme had been completed.

EMIN subscale: Table 5.29 presents the results of the Tukey HSD test for EMIN subscale demonstrating significant time effect.

Table 5.29: *Tukey HSD Test for EMIN subscale*

| TIME | TIME ONE | TIME TWO | TIME THREE |
|---|---|---|---|
| Means | 5.69 | 5.64 | 5.44 |
| Time One | - | - | - |
| Time Two | 0.7480 | - | - |
| Time Three | 0.0008 | 0.0103 | - |

Note:  $p < 0.05$ and all underlined scores are statistically significant

The main effect of time for the EMIN subscale of both intervention and control groups combined yielded a significant F ratio $F_{(2,440)} = 7.38$, $p = 0.0007$, (see Table 5.22).  The Tukey HSD indicated that the mean change score significantly decreased from Time One to Time Three as well as from Time Two to Time Three.  The results suggest that there was a general weakening in EMIN for the entire group of participants over the period of the study measurements.

EMER subscale: Table 5.30 presents the results of the Tukey HSD test for EMER subscale demonstrating significant group effect and Table 5.31 presents the results of the Tukey HSD test for EMER subscale indicating the significant time effect.

Table 5.30: *Tukey HSD Test for EMER subscale (group effect)*

| GROUP | INTERVENTION | CONTROL |
|---|---|---|
| **Means** | **5.87** | **6.13** |
| **Intervention** | - | <u>0.0395</u> |
| **Control** | - | - |

Note:  p < 0.05 and all underlined scores are statistically significant

Table 5.31: *Tukey HSD Test for EMER subscale (time effect)*

| TIME | TIME ONE | TIME TWO | TIME THREE |
|---|---|---|---|
| **Means** | **6.16** | **5.95** | **5.90** |
| **Time One** | - | - | - |
| **Time Two** | <u>0.0012</u> | - | - |
| **Time Three** | <u>0.0001</u> | 0.7392 | - |

Note:  p < 0.05 and all underlined scores are statistically significant

The group effect for the EMER subscale, yielded a significant F ratio F(2,440) = 4.23, p = 0.041 (see Table 5.23).  The Tukey HSD test indicated that the mean score of the control was significantly stronger than the mean score for the intervention group, irrespective of time (see Table 5.30).  The time effect for the EMER subscale of both intervention and control groups combined yielded a significant F ratio F(2,440) = 10.45, p = 0.000 (see Table 5.23).  The Tukey HSD test indicated that the mean score significantly decreased from Time One to Time Two as well as from Time One to Time Three (see Table 5.31).

The results suggest that the control group showed stronger scores for EMER than the intervention group for the entire period of the study. Furthermore, both groups seemed to experience a decrease in EMER for the period of the three measurements.

## 5.5 Third hypothesis

The third hypothesis stated that the career development programme would significantly strengthen the correlation between the constructs CDMSE and academic motivation. It was, therefore, necessary to determine whether there was a significant correlation between the intervention group's CDMSE and each of the seven subscales of the AMS.  Pearson's product-moment correlation coefficients were used to determine the relationships between the variables. Table 5.32 reports a matrix of the intervention groups' CDMSE and academic motivation correlations taken at Time One, Two and Three.

Table 5.32: *Correlations between CDMSE and academic motivation for the intervention group*

| | TIME ONE | TIME TWO | TIME THREE |
|---|---|---|---|
| | *CDMSE* | *CDMSE* | *CDMSE* |
| *Academic Motivation* | | | |
| IMTK | .38* | .47 * | .45 * |
| IMTA | .40* | .50 * | .43 * |
| IMES | .19* | .32 * | .35 * |
| EMID | .40* | .40 * | .30 * |
| EMIN | .30* | .35 * | .34 * |
| EMER | .12 | .20 * | .25 * |
| AMOT | -.10 | -.09 | .00 |

Note: * indicates correlations are significant ($p < .05$).

**5.5.1 Intrinsic motivation and CDMSE.**  An inspection of Table 5.32 shows that there were positive and statistically significant correlations between CDMSE and each of the three subscales of intrinsic motivation, that is, IMTK, IMTA and IMES at Time One, Two and Three of the intervention group.  Furthermore, the results suggest that the relationship strengthened between CDMSE and intrinsic motivation over the period of the programme indicating that learners who reported higher CDMSE were also more likely to evidence higher intrinsic motivation.  These results would lend support to the third hypothesis.

Eight weeks after the completion of the programme, the results revealed a slight weakening in the correlative relationship between CDMSE and IMTK, and CDMSE and IMTA. Nevertheless, Time Three observations indicated a further strengthening in the relationship between CDMSE and IMES, suggesting that learners who reported higher CDMSE were also more likely to be orientated to stimulating experiences which could include activities such as intellectual stimulation.

**5.5.2 Extrinsic motivation and CDMSE.**  Table 5.32 indicates that there was a positive and statistically significant correlative relationship between CDMSE and two of the subscales of extrinsic motivation, that is, EMID and EMIN at Time One, Two and Three of the intervention group. Indeed, the results reveal moderate correlative relationships between CDMSE and EMID; and CDMSE and EMIN for the duration of the study.  This would suggest that a learner who reported higher levels of CDMSE would also have higher levels of motivation (EMID) to engage in activities because of the importance he/she subscribes to it even though it is extrinsically motivated.  The results showed a weakening in the correlative relationship between CDMSE and EMID eight weeks after the completion of the programme.  A learner who expressed higher levels of CDMSE would also manifest enhanced motivation (EMIN) to engage in activities to maintain self-worth or out of a sense of obligation.  There was a minimal strengthening in the weak correlation between CDMSE and EMIN after the presentation of the programme.

Whilst there was a positive and statistically significant correlation between CDMSE and EMER at Time Two and Three of the intervention group, the correlation was weak and only strengthened slightly at Time Two and Three.

**5.5.3 Amotivation and CDMSE.**  Table 5.32 shows, as expected, CDMSE was negatively associated with amotivation and there was no statistically significant correlation between amotivation and CDMSE at Time One, Two or Three.

## 5.6 Additional analyses:  Differences among the schools

The hypotheses of this study were based on a population of Grade 11 learners who came from three schools with diverse socio-economic statuses. Additional statistical analyses were conducted to assess the effect of the socio-economic status of the school on a career development programme.  Table 5.33 provides the descriptive statistics of CDMSE for the three schools over the three measurements.

Table 5.33: *Descriptive statistics of CDMSE for the three schools*

| | | INTERVENTION GROUP | | CONTROL GROUP | |
|---|---|---|---|---|---|
| | | **Mean** | **SD** | **Mean** | **SD** |
| **School A** | **Time 1** | 3.71 | 0.52 | 3.67 | 0.55 |
| | **Time 2** | 3.92 | 0.51 | 3.69 | 0.57 |
| | **Time 3** | 3.82 | 0.58 | 3.73 | 0.56 |
| **School B** | **Time 1** | 3.57 | 0.50 | 3.51 | 0.47 |
| | **Time 2** | 3.96 | 0.49 | 3.62 | 0.35 |
| | **Time 3** | 3.84 | 0.49 | 3.69 | 0.44 |
| **School C** | **Time 1** | 3.92 | 0.37 | 3.95 | 0.47 |
| | **Time 2** | 4.03 | 0.35 | 3.95 | 0.39 |
| | **Time 3** | 3.89 | 0.33 | 3.73 | 0.41 |

Table 5.34 provides the descriptive statistics of AMS for the three schools' intervention group taken over the three measurements.

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Table 5.34: *Descriptive statistics of AMS for the three schools' intervention group*

|  |  | SCHOOL A | | SCHOOL B | | SCHOOL C | |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Mean** | **SD** | **Mean** | **SD** | **Mean** | **SD** |
| **Time One** | **IMTK** | 5.35 | 0.98 | 5.14 | 1.25 | 6.03 | 0.76 |
|  | **IMTA** | 4.90 | 1.22 | 5.01 | 1.38 | 5.58 | 0.85 |
|  | **IMES** | 4.12 | 1.13 | 3.97 | 1.19 | 4.86 | 1.38 |
|  | **EMID** | 6.04 | 1.02 | 6.10 | 1.03 | 6.44 | 0.82 |
|  | **EMIN** | 5.23 | 1.51 | 5.69 | 1.40 | 5.93 | 1.01 |
|  | **EMER** | 5.69 | 1.46 | 6.45 | 0.82 | 6.07 | 0.96 |
|  | **AMOT** | 1.47 | 0.79 | 1.74 | 1.10 | 1.28 | 0.55 |
| **Time Two** | **IMTK** | 5.58 | 0.96 | 5.17 | 1.33 | 5.99 | 0.91 |
|  | **IMTA** | 5.11 | 1.19 | 5.25 | 1.37 | 5.40 | 0.97 |
|  | **IMES** | 4.22 | 1.06 | 4.19 | 1.28 | 4.60 | 1.27 |
|  | **EMID** | 6.03 | 0.85 | 6.24 | 1.12 | 6.22 | 0.86 |
|  | **EMIN** | 5.33 | 1.57 | 5.69 | 1.38 | 5.81 | 1.01 |
|  | **EMER** | 5.51 | 1.49 | 6.19 | 1.22 | 5.78 | 1.04 |
|  | **AMOT** | 1.48 | 0.99 | 1.77 | 1.29 | 1.33 | 0.69 |
| **Time Three** | **IMTK** | 5.26 | 0.99 | 5.02 | 1.54 | 5.78 | 0.97 |
|  | **IMTA** | 4.87 | 1.34 | 4.97 | 1.47 | 5.39 | 1.03 |
|  | **IMES** | 3.98 | 1.21 | 4.11 | 1.57 | 4.60 | 1.23 |
|  | **EMID** | 5.80 | 1.17 | 5.94 | 1.17 | 6.03 | 1.05 |
|  | **EMIN** | 4.96 | 1.45 | 5.47 | 1.43 | 5.70 | 1.17 |
|  | **EMER** | 5.37 | 1.25 | 6.19 | 1.19 | 5.71 | 1.08 |
|  | **AMOT** | 1.52 | 1.20 | 2.12 | 1.36 | 1.31 | 0.66 |

Table 5.35 provides the descriptive statistics of AMS for the three schools' control group taken over the three measurements.

Table 5.35: *Descriptive statistics of AMS for the three schools' control group*

|  |  | SCHOOL A | | SCHOOL B | | SCHOOL C | |
|---|---|---|---|---|---|---|---|
|  |  | Mean | SD | Mean | SD | Mean | SD |
| **Time One** | **IMTK** | 5.01 | 1.32 | 5.56 | 1.06 | 5.83 | 0.84 |
|  | **IMTA** | 4.54 | 1.54 | 5.42 | 0.99 | 5.41 | 0.90 |
|  | **IMES** | 3.64 | 1.26 | 4.53 | 1.14 | 4.81 | 0.87 |
|  | **EMID** | 5.93 | 1.04 | 6.43 | 0.64 | 6.43 | 0.58 |
|  | **EMIN** | 5.02 | 1.68 | 6.11 | 0.74 | 6.32 | 0.48 |
|  | **EMER** | 5.97 | 0.98 | 6.34 | 0.79 | 6.54 | 0.58 |
|  | **AMOT** | 1.68 | 1.21 | 1.43 | 0.84 | 2.07 | 1.08 |
| **Time Two** | **IMTK** | 4.84 | 1.39 | 5.39 | 0.96 | 5.57 | 0.78 |
|  | **IMTA** | 4.52 | 1.36 | 5.15 | 0.94 | 4.82 | 0.72 |
|  | **IMES** | 3.51 | 1.21 | 4.43 | 1.01 | 4.18 | 1.13 |
|  | **EMID** | 5.45 | 1.25 | 5.94 | 0.94 | 6.11 | 0.70 |
|  | **EMIN** | 4.97 | 1.57 | 5.70 | 1.15 | 6.49 | 0.64 |
|  | **EMER** | 5.73 | 1.13 | 6.15 | 0.95 | 6.40 | 0.43 |
|  | **AMOT** | 1.79 | 1.22 | 1.51 | 0.84 | 2.41 | 1.46 |
| **Time Three** | **IMTK** | 4.68 | 1.30 | 5.27 | 1.15 | 5.54 | 0.93 |
|  | **IMTA** | 4.43 | 1.25 | 5.17 | 1.13 | 5.09 | 0.95 |
|  | **IMES** | 3.67 | 1.21 | 4.43 | 1.07 | 4.41 | 1.00 |
|  | **EMID** | 5.42 | 1.06 | 6.13 | 0.86 | 6.06 | 0.75 |
|  | **EMIN** | 4.79 | 1.47 | 5.80 | 1.04 | 6.14 | 0.72 |
|  | **EMER** | 5.73 | 0.85 | 6.24 | 0.82 | 6.27 | 0.75 |
|  | **AMOT** | 1.71 | 1.09 | 1.84 | 1.15 | 1.82 | 0.97 |

The one-way ANOVA was performed to determine whether there were any statistically significant differences between the means of the three schools with regards to CDMSE and academic motivation.  More specifically, statistical procedures were used to assess whether the average increments of CDMSE and academic motivation differed between the school for the three time periods (Time One – Time Two; Time One – Three; Time Two – Time Three) with regard to the intervention groups as well as the control groups.

**5.6.1 CDMSE of the intervention group.** An ANOVA yielded statistically significant results which suggest that there are at least two group means which are significantly different from each other. An analysis of variance on the CDMSE scores yielded significant variation among the three schools for the time period, Time One to Time Two ($F(2,108) = 3.57$, p = .03) as well as for the Time One to Time Three period ($F(2,108) = 3.23$, p = 0.04).  No significant difference was reported between the three school's CDMSE mean scores for the time period between the second and third observation.

The one-way ANOVA is an omnibus test statistic, meaning that it will not provide information as to which specific groups were significantly different from each other. A post hoc test was therefore used to confirm where the differences occurred between the groups.  The current study's data met the assumption of homogeneity of variances, so the Tukey's honestly significant difference (HSD) was used.  The Tukey test showed that School B (M = 0.39; SD = 0.53) and School C (M = 0.11; SD = 0.43) differed significantly, that is, the learners from School B intervention group showed significant average gains in CDMSE between Time One and Time Two when compared with the intervention group from School C for the same period. A Cohen's d value of 0.58 indicates a medium size effect.  Additionally, the Tukey test indicated significant differences between the mean gains of CDMSE for the intervention group learners from School B (M = 0.27; SD = 0.60) when compared with School C (M = -0.03; SD = 0.38) for the time period between Time One and Time Three.  A Cohen's d value of 0.59 indicates a medium size effect.  School A was not significantly different from the other groups, lying somewhere in the middle.

**5.6.2 Academic motivation of the intervention group.**  An ANOVA revealed no statistically significant difference among the three schools for AMS scores for the three time periods as reported in Table 5.36.

Table 5.36: *Results of ANOVA for AMS scores*

|  |  | F | p |
|---|---|---|---|
| **Time One → Time Two** | **IMTK** | 0.95 | 0.39 |
|  | **IMTA** | 2.68 | 0.07 |
|  | **IMES** | 2.16 | 0.12 |
|  | **EMID** | 1.44 | 0.24 |
|  | **EMIN** | 0.40 | 0.67 |
|  | **EMER** | 0.13 | 0.88 |
|  | **AMOT** | 0.04 | 0.96 |
| **Time One → Time Three** | **IMTK** | 0.27 | 0.76 |
|  | **IMTA** | 0.33 | 0.72 |
|  | **IMES** | 1.29 | 0.28 |
|  | **EMID** | 0.62 | 0.54 |
|  | **EMIN** | 0.02 | 0.98 |
|  | **EMER** | 0.09 | 0.91 |
|  | **AMOT** | 1.56 | 0.22 |
| **Time Two → Time Three** | **IMTK** | 0.46 | 0.63 |
|  | **IMTA** | 1.06 | 0.35 |
|  | **IMES** | 0.87 | 0.42 |
|  | **EMID** | 0.19 | 0.83 |
|  | **EMIN** | 0.94 | 0.39 |
|  | **EMER** | 0.27 | 0.76 |
|  | **AMOT** | 2.33 | 0.10 |

**5.6.3 CDMSE of the control group.** When the CDMSE mean scores of the three schools were compared for the time period between the first and second observation for the control group, the ANOVA yielded no statistically significant difference between the three schools. However, the ANOVA reflected statistical significant variation among the three schools for the Time One to the Time Three period ($F(2,108) = 8.13$, p = 0.001) as well as for the Time Two to Time Three period ($F(2,108) = 7.89$, p = .001).

A post hoc test was used to confirm where the differences occurred between the groups.  The Tukey's honestly significant difference (HSD) test was applied and    showed that the CDMSE scores from School C (M = -0.21; SD = 0.38) control group were significantly weaker than School A (M = 0.05; SD = 0.40) between Time One and Time Three.  The Tukey HSD test also indicated that the CMDSE scores from School C (M = -0.21; SD = 0.38) control group were significantly weaker than School B (M = 0.17; SD = 0.45) control group for the same time period, that is, Time One to Time Three. Table 5.37 reflects the p values of the Tukey HSD test for CDMSE scores for Time One to Time Three.

Table 5.37: *Tukey HSD test for CDMSE scores for Time One to Time Three*

| SCHOOL | {1} | {2} | {3} |
|---|---|---|---|
| | p | p | p |
| School A {1} | - | - | - |
| School B {2} | 0.40 | - | - |
| School C {3} | 0.016 | 0.001 | - |

Note:  All underlined scores are statistically significant

The Cohen's d value of 0.68 reflected a medium size effect between School A and School C scores and the Cohen's d value of 0.93 reflected a large size effect between School B and School C for the time period between Time One and Time Three.

The Tukey's honestly significant difference (HSD) test was applied to the data for the time period Time Two to Time Three and showed that the CDMSE scores from School C (M = -0.21; SD = 0.34) control group were significantly weaker than School A (M = 0.04; SD = 0.32). The Tukey HSD test also indicated that the CMDSE scores from School C (M = -0.21; SD = 0.34) control group were significantly weaker than School B (M = 0.07; SD = 0.33) control group for the same time period. Table 5.38 reflects the p values of the Tukey HSD test for CDMSE scores for Time Two to Time Three.

Table 5.38:  *Tukey HSD test for CDMSE scores for Time Two to Time Three*

| SCHOOL | {1} | {2} | {3} |
|---|---|---|---|
| | p | p | P |
| School A {1} | - | - | - |
| School B {2} | 0.91 | - | - |
| School C {3} | <u>0.003</u> | <u>0.002</u> | - |

 Note:  All underlined scores are statistically significant

The Cohen's d value of 0.77 reflected a medium size effect between School A and School C and a Cohen's d value of 0.85 reflected a large size effect between School B and School C scores for the time period of Time Two to Time Three.

There was no statistically significant difference between School A and School B scores for the control group's CDMSE.

**5.6.4 Academic motivation of the control group.**  The ANOVA test showed no statistically significant differences among the three schools for AMS scores for the period of Time One to Time Two.  However, the ANOVA indicated a significant difference for the Amotivation subscale in the period between Time One to Time Three ($F(2,108) = 3.68$, p = 0.03) as well as for Time Two to Time Three ($F(2,108) = 8.42$, p = .000).

A post hoc test was used to confirm where the differences occurred between the groups.  The Tukey's HSD test was applied and showed that the School C (M = -0.25; SD = 1.04) control group scores for the Amotivation subscale of the AMS differed significantly less from School B (M = 0.40; SD = 1.21) control group scores between Time One to Time Three.   Table 5.39 reflects the p values of the Tukey HSD test for Academic Motivation scores for Time One to Time Three.

Table 5.39: *Tukey HSD test for AMS for Time One to Time Three*

| SCHOOL | {1} | {2} | {3} |
|---|---|---|---|
| | P | p | p |
| School A  {1} | - | - | - |
| School B {2} | 0.24 | - | - |
| School C {3} | 0.44 | <u>0.02</u> | - |

Note:  All underlined scores are statistically significant

The Cohen's d value of 0.58 reflects a medium effect between School C and School B for the time period between Time One and Time Three.

The Tukey's HSD test was applied and showed that the School C (M = -0.59; SD = 1.20) control group scores for the Amotivation subscale of the AMS differed significantly less from School B (M = 0.33; SD = 1.04) control group scores between Time Two to Time Three.   Table 5.40 reflects the p values of the Tukey HSD test for Academic Motivation scores for Time Two to Time Three.

Table 5.40: *Tukey HSD test for AMS for Time Two to Time Three*

| SCHOOL | {1} | {2} | {3} |
|---|---|---|---|
| | p | p | P |
| School A  {1} | - | - | - |
| School B  {2} | 0.15 | - | - |
| School C  {3} | 0.05 | <u>0.0003</u> | - |

Note:  All underlined scores are statistically significant

The Cohen's d value of 0.82 indicates that there is a large effect size between the control groups of School C and School B for Amotivation between Time Two and Time Three.

**5.7 Chapter summary**

The findings of the study relative to the three research hypotheses can be summarized as follows:

**5.7.1 First hypothesis.**  The first hypothesis explored how effective a six week career development programme was for Grade 11 learners from diverse SES schools compared to a control group in enhancing their career decision-making efficacy. Strong evidence was obtained to give support to the first hypothesis with respect to the career programme enhancing the Grade 11's CDMSE.  More specifically, statistically significant gains were observed in the intervention group for CDMSE, whereas no significant gains were evidenced for the control group's CDMSE.   In addition, these gains were sustained for eight weeks after the completion of the programme.

**5.7.2 Second hypothesis.**  Statistical analyses indicate partial support for the goal of improving academic motivation of Grade 11 learners.  When comparing the intervention group and control group by subjecting the data to independent t-test analysis, the results suggest that the career intervention programme enhanced three types of self-determined and autonomous motivation, more specifically, IMTK, IMTA and EMID. No long-term effects were, however, evidenced. Nevertheless, repeated measures MANOVA, repeated measures ANOVA and Tukey HSD, which require a more stringent threshold of significance, were conducted and evidenced no statistically significant gains in any AMS subscale.  Indeed, the results yielded seem to suggest that the learners from the control group experienced a significant decrease in IMTA during the time their peers in the intervention group were participating in the career programme. A significant decrease was found in the control and intervention group's IMTK, EMID, and EMIN for the duration of the study's measurements. Furthermore, the results indicate that the control group was stronger in EMER than the intervention group for the period of the study.

**5.7.3 Third hypothesis.**  The third hypothesis addressed the following question: Was there a correlative relationship between career decision-making self-efficacy and academic motivation?

The pre-test results note that CDMSE was positively and significantly related with intrinsic motivation and, subsequent to the programme, the relationship strengthened, hence, support was found for the hypothesised relationship between CDMSE and academic motivation. As expected, CDMSE was negatively associated with amotivation.

**5.7.4 Impact of socio-economic status of the schools.**  Hypotheses one and two of this study generated a question: What was the impact of the socio-economic status of the school on a career development programme that intended to enhance career decision-making self-efficacy and academic motivation of Grade 11 learners?

The intervention group from School B, with a medium SES level and School C, with a low SES level, differed significantly in relation to CDMSE, over the entire period of the study as well as the time period of the programme's presentation.  School B showed stronger levels of CDMSE than School C. School A was not significantly different from the other groups, lying somewhere in the middle.

The control group from School C scored significantly lower in CDMSE than the control groups from School A and School B respectively.

With regard to the AMS scores, the three schools' intervention groups yielded no significant differences.  The control group from School C showed a statistically weaker difference from School B control group's amotivation scores.

The effect of the intervention on the learners' CDMSE and academic motivation and interpretation of the results and conclusions in respect of the findings will be discussed in Chapter 6.

*CHAPTER 6*

**DISCUSSION, RECOMMENDATIONS AND CONCLUSIONS**

*"A journey of 1000 miles begins with one step."*

Confucius

**6.1 Introduction**

A person's career provides meaning to his/her life and functions as an extension of his/her identity (Wuthnow, 2003); therefore, career decision-making is one of the most significant tasks of life.  Adolescence forms a pivotal developmental period in the exploration and formation of potential career objectives (Gushue, 2006), where high school learners have to make crucial career decisions that will inevitably impact the rest of their lives.  Adequate and effective career guidance and counselling forms an essential service to South African high school learners as they prepare to transition from school to tertiary education or the market place.  There is a call for a valid, reliable and affordable career intervention in South Africa which is based on a clear theoretical and empirical framework, such as SCCT (Buthelezi et al., 2009).

This investigation sought to serve policy makers, educators, career researchers and South African youth by developing an effective career intervention, within a SCCT theoretical framework, which is empirically proven to address the needs for career development of South African high school learners from diverse socio-economic strata.

Research has shown that learners who complete a career course are more likely to persist in their education (Troyer & Rasmussen, 2003) by reinforcing the connection between education attainment and prospective vocational and career wellbeing.  The underlying premise is that, if learners are involved in career exploration activities and develop a clear understanding of their career goals, they will have higher motivational beliefs and levels of school engagement. Thus, this study also sought to examine the impact of a career development programme on learners' academic motivation.  Additionally, the

present research explored the relationship between career self-efficacy and academic motivation.

Career interventions do not happen in a vacuum (Ali et al., 2012) and South African researchers are reminded to consider multicultural and economic contexts as important factors in understanding career behaviour (Stead & Watson, 2006). Thus, in order to understand the complexities and difficulties of career guidance in South Africa, it is necessary to appreciate the socio-economic context as well as the education and training system of the country (SAQA, 2012).

There is a need for research that will lead to greater equity and social justice and create social change for the benefit of marginalised people (Prilleltensky & Nelson, 2002).  The lack of career development in schools and the way it reinforces the low socio-economic position of people in the country needs to be addressed.  Hence, this study further sought to examine the factors related to socio-economic status and the impact of a career development programme in South African schools with diverse socio-economic backgrounds.

This chapter will, firstly, present a discussion of the findings of the study in relation to the research hypotheses and the research goals.  Secondly, an account will be given of the limitations of the study, and finally, a conclusion of the study will be given.

## 6.2 Discussion on the findings of this study

The results of this empirical investigation will be discussed in relation to the three hypotheses.

**6.2.1 Hypothesis one.**  Hypothesis one assessed whether the CDMSE scores of Grade 11 learners who attended schools with diverse socio-economic backgrounds would be enhanced by completing a career development programme.

The findings of the current study indicate that the CDMSE of the learners from the intervention group was significantly enhanced after completing the career development course. Indeed, the intervention group showed significant

gains from the initial measurements taken to the final measurements taken eight weeks after the conclusion of the programme. The CDMSE gains of the intervention group were corroborated when compared to the control group's CDMSE measurements where no gains were evidenced. A small practical significance was yielded.

These results are consistent with previous research findings which demonstrated the usefulness and effectiveness of career development courses on enhancing career decision-making self-efficacy (Betz, Harmon, & Borgen, 1996; Betz & Schifano, 2000; Brown & Krane, 2000; Brusoski, Golin, Gallagher, & Moore, 1993; Kraus & Hughey, 1999; Luzzo et al., 1999; McWhirter, Rasheed, & Crothers, 2000; Reese & Miller, 2006; Scott & Ciani, 2008; Taylor & Betz, 1983). Oliver and Spokane's (1988) review of career guidance interventions found that career interventions have the most impact on the development of career decision-making skills, as compared to other possible outcomes such as career-related knowledge.

The results of the present study are significant as they lend empirical support to the theoretical role of SCCT as an effective model to bolster learners' confidence in making career decisions. Moreover, the success of the intervention is believed to be attributable to the use of established career theory as opposed to many career development programmes which are generically designed with intuition and common sense. Halasz, Kempton and Luzzo (2000) surveyed 40 institutions where career development courses were presented and found that most career practitioners did not use a theoretical framework or they did not even know which theory was being implemented with their courses. One of the intentions of this study was to help form a link between practice and theory in the development of a South African career intervention programme. Results from the present study have valuable implications for the development of relevant career intervention programmes for South African learners. Indeed, the intervention used in the present study was essentially designed at two levels, firstly, at a theoretical level and, secondly, at a practical level. The course was designed within the theoretical framework of the SCCT as well as using

pedagogically relevant and empirically proven techniques and methods as recommended by researchers, for example, Bandura's four sources of learning; Brown and Krane's (2000) five components of an effective career intervention; the domain of behaviours used in the CDMSES-SF measuring instrument; and integrating structure, age-appropriate activities, hands-on experience, and assessments into the programme design.

The findings of this study indicate that the career intervention programme enhanced the CDMSE of learners.  In essence, this means these young people will be better equipped to engage with and complete the career development tasks more efficiently than a learner who has low CDMSE and has not been exposed to the programme. Career self-efficacy coupled with outcome expectations leads to the generation of career interests, goals, and ultimately career development performance. Students who do not make a confident decision about their career goals are more likely to vacillate, drop out of school, have lower grades, and experience more difficulty with adjusting to tertiary education (Reese & Miller, 2010).  The intervention, underpinned with a SCCT theoretical framework, promoted positive yet realistic career self-efficacy and outcome beliefs.  In other words, learners were encouraged to assess their self-efficacy estimates on objectively assessed skills or past performances. Learners were empowered to believe that they have personal agency with regard to their future careers.

While the intervention group showed significant gains from Time One to Time Three, there was a statistically significant decrease in their measurement from Time Two to Time Three. It seems that the CDMSE gains achieved through the programme were not fully sustained. Long-term internalisation is necessary for an effective psycho-educational programme, and therefore this result is important as it adds to the research insight into the longevity of intervention work. A more powerful test of the effectiveness of the intervention would be to assess the link between it and later career choice success experienced by the learners in both the intervention and control groups.  Unfortunately this was not possible within the short-term confines of the present study; however, an area for future

exploration would be to find a way to gain a stronger long-term effect. Research indicates that there is a tendency to neglect the period after a career intervention has been delivered (Heppner & Heppner, 2003; Savickas, 2001). Hughes and Karp (2004) note from their meta-analyses that most studies did not conduct follow-up research over time to see the lasting nature of any knowledge gain or attitude change.

It is suggested that career development programmes are followed up with booster sessions during the subsequent weeks of the programme in order to consolidate the impact of the intervention. Moreover, research typically only assesses the impact of the programme on an immediate or short-term time-frame, rather than on the value of the long-term effects of the programme. To improve the effectiveness of a career intervention, it is recommended that future studies conduct longitudinal studies to gain a clearer understanding of the long-term impact of the programme.  Consideration could also be given to the duration and time of the intervention.  A programme of longer duration involving more sessions may contribute to a more sustained outcome.

While this study and research clearly supports the notion that career interventions are useful and effective in bringing about positive change in CDMSE, there is less clarity regarding the specific mechanism that increases CDMSE.  Career intervention research needs to investigate the processes and mechanisms of change to build on current research (Reese & Miller, 2006). Research is required to examine how career interventions specifically affect career–related beliefs.  Betz (2006), Sullivan and Mahalik (2000) and the findings of this study indicate that successful career interventions are based on the four sources of self-efficacy: mastery experience, vicarious experience, social persuasion, and physiological state. Future research could test these assertions by examining the reasons for the underlying mechanisms as well as investigate which of the four sources of self-efficacy serve as the most powerful contributors to enhancing the learners' CDMSE.   A qualitative evaluative approach may help identify these mechanisms.

**6.2.2 Hypothesis two.** Hypothesis two assessed whether the career development programme would enhance academic motivation.  The findings of the independent t-test suggest that the career development programme enhanced the intervention group's motivation, more specifically their Intrinsic Motivation to Know (IMTK) and Intrinsic Motivation to Accomplish (IMTA).  The results also indicate that the career programme enhanced the intervention group's Extrinsic Motivation Identified Regulation (EMID) which is the most autonomous, self-determined form of extrinsic motivation represented on the AMS.  These results appeared to be supported by the fact that the control group failed to make any significant gain for all seven subscales of the Academic Motivation Scale.

Intrinsic motivation is viewed as the more autonomous academic motivation. It is intrinsic, self-determined motivation that most powerfully predicts positive school-related engagement and success (Hardré & Reeve, 2003). These results lend partial support to the second hypothesis.  It is noted, however, that according to the results of the independent t-tests, the strengthening in motivation made by the intervention group did not sustain for eight weeks after the completion of the programme.

In pursuit of performing good research, the data was subjected to more sophisticated statistical analyses, that is, the repeated measures MANOVA, repeated measures ANOVA and Tukey HSD, which require a higher threshold of significance. The findings showed no statistically significant gains in any AMS subscale for the intervention group or the control group.  Indeed, the results yielded suggest the following findings: there was a significant decline in Intrinsic Motivation to Know (IMTK), Identified Regulation (EMID) and Introjected Regulation (EMIN) for the intervention and control group over the period of the study and learners from the control group experienced a decrease in Intrinsic Motivation to Accomplish (IMTA) during Time One to Time Two. The findings suggest that the control group experienced stronger External Regulation (EMER) than the intervention group for the period of the study.  The results yielded by the MANOVA, ANOVA and post hoc tests imply that the career programme did not

have an impact on academic motivation.  The null hypothesis could thus not be discarded.

Although there is no evidence of published, peer-reviewed South African research on the impact of a career intervention programme on academic motivation, the findings in this study aligned with previous research which concluded that their results were not clear (Dykeman et al., 2003).  They contended that it was an important relationship and recommended that further studies in the area were needed.  Furthermore, Lapan, Gysbers and Sun (1997) report that learners who participate in career development curriculum show significantly more understanding of career possibilities, more future orientation, and greater self-efficacy and increased school engagement. Another programme designed to enhance learners' self and career-related knowledge found gains in student achievement and educational attitudes among Grade 9 and Grade 10 learners from a low-income city high school (Solberg, Close, & Metz, 2001).

Hughes and Karp (2004) conducted a meta-analysis where they found evidence of different types of career guidance interventions which helped learners understand the connection between their goals and the necessary steps to take towards them. They claim that this type of intervention is potentially very effective, but further examination is warranted.  Despite the findings of the current study, the relationship between academic motivation and career development especially the mechanisms and dynamics underlying the process need further investigation.

Several meta-analyses of career education interventions among high school learners indicate that the programmes that impact academic achievements the most, occur over an extended period of time, averaging about two years, with consistent delivery and high dosage effect as well as complementing academic enhancement and progress in language, art or mathematics performance (Baker & Taylor, 1998).  The current study's researcher delivered the career intervention over a period of six weeks with a total of nine contact hours and the only focus was career development. It seems that this time period is sufficient to enhance CDMSE, but not for academic

motivation.  It appears that the short time-frame of the study failed to bring about the process of internalisation where a learner adopts a value for learning and takes ownership of the learning process.

Academic motivation was embedded tacitly in the current study's programme and therefore there were no overt activities dealing directly with enhancing academic motivation. Wagner and Szamoskozi (2012) undertook an investigation to assess the impact of an intervention designed specifically to increase academic motivation.  Their findings showed that the intervention had a significant effect in enhancing academic motivation. They recommended that multidimensional intervention programmes, which directly target several motivational factors at the same time, are more effective.  Nevertheless, Martin (2005) showed gains on academic motivation from a broadly based youth enrichment programme that embedded the construct academic motivation tacitly into the programme.  There were common elements between the Martin (2005) study and the present study in that optimistic expectations were held by the researcher, there was a focus on mastery, and a climate of cooperation and rapport between the learners and the researcher (programme presenter).

The results of Wagner and Szamoskozi (2012), Martin (2005) and this study seem to indicate that it may be necessary to develop separate motivational and enrichment programmes which directly target a range of motivational factors.

**6.2.3 Hypothesis three.** The third hypothesis assessed whether the career development programme would significantly strengthen the correlation between career decision-making self-efficacy and academic motivation of Grade 11 learners who attended schools with diverse socio-economic backgrounds.

The findings obtained from this study indicate that the relationship between the intervention group's CDMSE and intrinsic motivation strengthened subsequent to the programme. These findings show a moderate effect size for the relationship between CDMSE and intrinsic academic motivation. Learners who are more confident in their ability to undertake behaviours required for effective career decision-making are more likely to report being intrinsically

motivated; conversely, it may be that learners who lack the confidence in their ability to complete career decision-making tasks may fail to be intrinsically motivated to engage in tasks.  No similar empirical research was found to corroborate or challenge these findings.

People who are more intrinsically motivated are purported to use deeper-level processing strategies and perform better academically, but also have better psychological well-being and derive more satisfaction out of life's activities (Ryan & Deci, 2000).  The link between CDMSE and academic motivation seems to be evident.

This study has shown a correlative relationship between CDMSE and intrinsic motivation; it would be valuable to establish the moderating variable in this relationship.

The results of this study revealed that there was only a significant strengthening in the relationship between CDMSE and the EMER subscale of extrinsic motivation, reflecting that stronger levels of CDMSE were associated with stronger levels of EMER motivation.  The EMER subscale refers to behaviour that is controlled by external sources, such as material rewards or constraints imposed by others.  Maurer et al. (2012) argue that extrinsic motivation does not appear to be related to learners' academic behaviours. To date, there does not appear to be comparable South African empirical research.

The negative correlative relationship observed in this study between amotivation and CDMSE endorses the present study's findings of a significant relationship between CDMSE and intrinsic motivation; higher career decision-making self-efficacy is associated with low levels of amotivation, and conversely, lower levels of career decision-making self-efficacy with higher amotivation.  The construct of intrinsic motivation refers to people engaging in an activity for its own sake and reflects the highest level of autonomy whereas amotivation refers to the absence of motivation.

The present study has highlighted a moderate correlative relationship between CDMSE and academic motivation. This does not allow for inferences regarding causal relationships and, therefore, an explication of the effects of

CDMSE on academic motivation and vice versa would provide useful information that could have powerful practical utility.

## 6.3 The impact of socio-economic status on the career development programme

Although CDMSE and academic motivation formed the two primary variables in the study, socio-economic status emerged as an additional and complementary focus. The impact of SES on the effectiveness of the career intervention will be discussed in relationship to, firstly, CDMSE and, secondly, academic motivation.

**6.3.1 CDMSE and SES.** *Intervention Group:* The findings of the present study showed that the intervention groups of School B and School C differed significantly with regard to CDMSE between the first and second measurements as well as between the first and last measurements.  There was a medium size effect.  School A did not differ from the other groups, lying somewhere in the middle.

The findings suggest that the learners from School B showed significantly stronger gains in CDMSE at the completion of the programme when compared to the learners at School C.  Whilst the gains in CDMSE that the learners from School B had made were not fully sustained for the eight week period after the completion of the course, they were still measuring significantly stronger CDMSE scores than their peers at School C after the third measurement.  There is no evidence of previous South African research to corroborate or compare these exact findings. Bernard-Phera (2000) reported that South African learners from disadvantaged backgrounds have a lower level of CDMSE when compared with learners from an affluent socio-economic background.  However, the learners from the Bernard-Phera study (2000) did not form part of an intervention study and these findings were merely a cross-sectional comparison of the two populations.

The differences observed in the findings between the two schools are of great interest and a number of explanatory inferences can be offered.  During the

course of the study, School C manifested operational challenges with regard to lack of facilities and equipment, time-table confusion and cancelled sessions due to school closing early or load-shedding. This contrasted with School B's management of the programme which was very organised, planned and consistent. School B also presented with up-to-date technological equipment. South African learners are still facing significant inequities in the school context. Socio-economic status appears to have a broader systemic impact affecting other subsystems in the learners' realm of experience (Albien, 2013). Most learners from low socio-economic backgrounds attend poorly resourced schools and have virtually no access to modern, up-to-date assessment (Maree, 2013). Deficits in basic resources abound in South Africa's schools, including lack of computer technology, lack of access to sanitary drinking water, and under-qualified teachers (South African Consulate General, 2008).  They frequently have to cope with crowded classrooms, poor school climate, low teacher morale, outdated textbooks, gang violence, little computer technology, and lower learning expectations (Perry, 2009).  Frederick (2008) observed that for every 10000 African primary school children, only 27 will pass Grade 12 with a bachelors' pass entitling them to attend university.  It is likely that learners from low SES backgrounds who typically attend schools close to their homes who are exposed to deficient education will also struggle to obtain effective and adequate career education.

This study has added credence to the contention that the influence of socio-economic context with regard to daily, practical realities cannot be negated when investigating ways to enhance CDMSE of South African learners.

Furthermore, it is possible that the learners at School B could be classified more in the upwardly mobile group and they were able to resonate with the course, unlike the learners at School C who came from poor families where deprivation forms an integral part of these young people's lives.  Learners who are contending with poverty, unstable family structures, and inhospitable school environments, have a greater concern with  meeting day-to-day primary needs

than seeking out information about careers (Ladany, Melincoff, Constantine, & Love, 1997).

Research has revealed that SES has been found to influence a person's career development (Buthelezi et al., 2009; Huang & Hsieh, 2013; Lent et al., 2000). The enablers of career development and success are often not part of the reality of learners from low SES backgrounds. Research has indicated that a large number of high school students from the lower SES group believed that they could not or did not need to pursue further education (Arulmani et al., 2003). They have limited access to job information, limited role models in their social network to potentially inspire career aspirations and CDMSE, limited chance of affording private education, and limited opportunities to engage in extra-mural activities which can provide a vehicle to explore more diverse interests and career paths (Albien, 2013). Indeed, this limits an expansive sense of self leading to circumscription and compromise in their career development (Gottfredson, 2001). Observers of social inequalities point out that it is not only about some people being poor, but that the same people continue to live at the bottom of the scale without the capacity to improve their situation (Ilaiah, 1994).  This is so relevant in South Africa today despite provision to reduce barriers for the upward mobility of lower income groups through various schemes such as awarding special scholarships, study loans, and government sponsored employment programmes. A large majority of learners seem to be unable to attain and capitalise on these opportunities for career development, thus staying trapped in the cycle of poverty.

Enhancing CDMSE could create the necessary platform and source of motivation upon which young people from disadvantaged backgrounds could approach career decision-making and planning in a more proactive manner. Nevertheless, this study has indicated that to help learners from low SES backgrounds enhance their CDMSE; they would require more sustained assistance and access to resources than a six week career intervention programme can provide. Further research is needed to establish the manner in which this could be achieved.

Researchers engaging in future research are cautioned to be sensitive to the link between the learners' beliefs about careers and their environment. It is also possible that cultural norms may impact learners; this is transmitted to the youth through a process of social learning. Albien (2013) asserts that individuals from collectivist cultures show a willingness to compromise their choices for the well-being of others in a societal context where harmony and wholeness are given paramount importance (Van der Merwe & Gobodo-Madikizela, 2008). In contrast, western societies place emphasis on individual achievement, satisfaction and actualisation (Du Toit & De Bruin, 2002; Stead & Watson, 1998). Differences in the meaning of vocational interests and aspirations may manifest, which calls for a re-examination of theoretical constructs emphasising individualism (e.g., career maturity and self efficacy) in career development (Du Toit & De Bruin, 2002). Families, neighbourhoods and school environments form an important part of this vehicle of socialisation. A career programme that takes learners' ideas and concepts into account (Arulmani, 2011) and their cultural values (Albien, 2013; Du Toit & De Bruin, 2002) will not be viewed as alien or irrelevant.

The intervention group from School A, which is pre-dominantly represented by learners from high SES backgrounds, yielded no significant difference with regard to CDMSE when compared to the results of the other two schools. While the learners at School A responded positively and enthusiastically to the programme, most of them would be aware that the intervention would not form the exclusive source of career development assistance. Indeed, many learners from this school undertake career assessments with the researcher on an individual basis.

*Control Group:* The study yielded no significant differences among the control groups of the three schools during the first and second observation for CDMSE; however, School C's control group showed significantly lower CDMSE scores when compared to School A and School B's control groups for the time period between the second and third measurements, and the first and third measurements for CDMSE.  It is interesting to note that there were no significant

differences between School A and School B's scores for the control group's CDMSE.

Research findings have indicated that many young South Africans believe that they have not received sufficient exposure to career development programmes because they come from disadvantaged backgrounds (Buthelezi et al., 2009). This finding seems to suggest that there is a tendency among young South Africans from low SES backgrounds to infer exclusion from opportunities as the typical schema of their lives. This is consistent with Gottfredson's (2002) theorising of how appraising social status circumscribes (reduces) career choice for individuals from lower SES levels.  Furthermore, the learners from School C's control group could have spoken to learners from School C's intervention group about the programme which gave them a sense of being left out, thereby impacting on their  CDMSE scores.

The stronger CDMSE of the control groups at School A and School B are indicative of learners whose experience and worldview encompass minimal limitations and therefore they typically perceive offers as realistic opportunities and, indeed, opportunities can often be viewed as a norm. The anticipation of receiving and participating in the programme, thereby, resulted in enhancing self-efficacy.

**6.3.2 Academic Motivation and SES.**  *Intervention Group*: No significant differences were observed among the intervention groups of the three schools for academic motivation.

*Control Group*: Whilst no significant differences were evident amongst the three schools for the control group's intrinsic and extrinsic motivation scores, the control group from School C showed a statistically stronger difference from School B's control group's amotivation scores from the first measurement to the last measurement, as well as the measurement from Time Two to Time Three.  It appears that being selected for the control group, as opposed to participating in the intervention, had an effect on the academic motivation of the learners. Amotivation is associated with a feeling of general helplessness and amotivated people often perceive their behaviour outside of their control (Pelletier, Dion,

Tucson, & Green-Demers, 1999).  It is possible that the learners from School B's control group experienced a greater sense of alienation and helplessness at not being chosen to participate in the programme when compared to the control group learners from School C. The learners from School B represent a sector of South African society where career opportunities have increased extensively with the new political dispensation.  Nevertheless, career support and guidance for these adolescents is limited. Typically parents who did not receive similar opportunities as teenagers are not always empowered to assist their children in the developmental task of career decision-making. As previously highlighted, the schools are generally not able to meet the career guidance needs of Grade 11s. The circumstance could possibly have been aggravated by the overt support of School B's management for the present study.

In addition, learners from the control group may have heard peers from the intervention group discussing the programme. It is feasible that the learners from School B felt marginalised at  not being selected to the intervention group, whereas, the learners from School C live in circumstances where a range of negative environmental factors are outside of their control and, therefore, they may have coped better with not being part of the intervention group.  Albien's (2013) findings in a low income township setting confirm that adolescents' poor future planning can be attributed to low SES.  Perhaps the learners from School C's control group did not value the invitation to attend the intervention after the study conclusion as much as the control learners from School B.

In essence, the control group are representative of many South African high school learners in that they are aware of career development opportunities, but do not have access to them or the resources to buy or access them.  The present study draws attention to the fact that learners from low SES backgrounds may require more than a six-week programme in order to assist them to develop their CDMSE.  South African researchers are encouraged to broaden their examination of contextual factors which have the potential to affect CDMSE. This study has highlighted the importance of exploring the learners' context, more specifically examining SES within the school environment.  Further research

would help gain a clearer understanding of the impact of the learners' family and community beliefs on the development of learners' CDMSE. Additionally, research is required to investigate the value of collaborating with parents, teachers and community people and to develop a network of support systems and promote personal agency.  Research needs to give attention to <u>how</u> to meet the different needs of public schools.

While demographic factors, such as gender and cultural influences in relation to CDMSE in the South African context, were outside the scope of this study, empirical studies have yielded mixed results regarding gender and CDMSE and thus future studies need to consider gaining a better understanding of the different gender needs (Scott & Ciani, 2008).  An exploration of learners' identification with their ethnic group and cultural values may form an important aspect of career education and would be of particular relevance to the South African context (Albien, 2013).

## 6.4 Limitations of the study

Although the results of this study are generally encouraging, several limitations need to be highlighted.  Firstly, the study only included self-efficacy in career decision-making (CDMSE) as a self-efficacy measure thereby excluding other career-related self-efficacy measures. CDMSE is distinct from self-efficacy for other career behaviours (Betz & Hackett, 2006) and, therefore, this study's findings may not be applicable to other types of self-efficacy variables. Moreover, the low alpha coefficient scores for the subscales of the CDMSE-SF may indicate concerns with the use of the measure for the study's population.  The low degree of reliability of the five subscales may be due to cultural factors as certain tasks included in the goal selection and problem solving subscales are not appropriate for some cultural populations, particularly for those from collective cultures (Creed et al., 2002). It is also important to note the number of items in the short form of the CDMSE may have influenced the subscale reliability (Fineschilescu, 2002).   This study, nevertheless, supports other South African research

indicating that the total score of CDMSES-SF can be used as a generalised measure of CDMSE (De Bruin & Cornelius, 2011; Watson et al., 2001).

Secondly, the study population was limited to three schools in the East London district. Cross validation of the present results is required to allow for a broader generalisation of results and, hence, further research is needed to determine whether these findings would replicate themselves in different South African urban settings, that is, outside of the East London district. Regions of South Africa may differ significantly in how resources are allocated for education.

Thirdly, the sample size was relatively small and may not have allowed sufficient power to detect all effects present. Attrition is a typical challenge in a quasi-experimental design across three time series.  Smaller sample size, however, may still be a compromise in using a more robust quasi-experimental research design (Campbell, 1957).

Fourthly, a major limitation of this study is that due to severe logistical considerations, it was not possible to do random sampling of participants for assignment to the two groups at the schools. The researcher was compelled to use pre-existing classroom-based groups for group assignment because of logistical considerations anticipated for the three sites in managing data collection and timetabling of the intervention sessions. As a result of this compromise in sampling, care should be exercised in drawing inferences of the findings to other populations of Grade 11 learners (McMillan & Schumacher, 2006).  Consideration should also be given to exposing the control group to an adapted generic career programme based on the Life Orientation curriculum as opposed to no intervention at all. This may have countered the lowered motivation scores encountered.

Fifthly, this study adopted parents' education and occupation as manifest indicators for measuring SES.  Huang and Hsieh (2011) raise concerns as to whether these indicators can sufficiently represent the adolescents' actual SES. Hence, further studies can include other measurement indicators, for example, neighbourhood context, parents' income level or other indices that factor in parental occupation or income.

Sixthly, the data presented in this study constituted all self-reported measures which can be subjective without further forms of corroboration. Hence it is suggested that further research be conducted that examines the same constructs using data derived from additional sources, for example, from teachers, parents and actual academic achievement data. Additionally, the present research was undertaken within a quantitative paradigm and thus participants were not asked for qualitative comment or feedback on the attributes. Indeed, all of the results were based on responses to Likert-type scales.  To increase the depth and richness of the findings, future research may carry out mixed-method analyses whereby quantitative results are supported and supplemented by qualitative information.  Participants could be interviewed or a focus group could be used after the survey portion of the study is completed. Moreover, a qualitative approach may also assist in identifying the mechanisms that undergird the career decision-making process and the antecedents of academic motivation; evaluative feedback may also help to improve the content and design and hence the efficacy of the programme.

## 6.5 Conclusion

In conclusion, the current study was borne out of an attempt to alleviate and heighten awareness of the problems experienced by South African youth in making effective, informed career decisions.  Coupled to this, South Africa needs to build a body of research that is indigenous (Bernhard-Phera, 2000; De Bruin, 1999; Langley, 1999) and relevant for the South African population.  A group base career development programme, with a sound empirical basis, was considered as an alternative to the traditional individual career interview approach in assisting large numbers of young people with career development. The goal of this study was to determine the effect of a career intervention programme on the CDMSE and academic motivation of Grade 11 learners at three schools with diverse socio-economic backgrounds in the East London district.

This study's findings have several implications for researchers and practitioners specialising in career development. Findings from this study contribute to current research and practice by shedding light on the impact of a career development programme and revealing how interventions may serve South African Grade 11 learners. More specifically, the current study has extended an understanding of how to develop, implement, and evaluate a career education programme for schools with different socio-economic backgrounds. This study might assist policy-makers, career researchers and psychologists, and career educators to develop a viable strategy for theory-driven career interventions in South African high schools.

CDMSE, understood as a person's belief that s/he can successfully complete tasks necessary for making career decisions, is an effective construct that can be used to assess the career development of the person. However, caution is needed with using the CDMSES-SF as only its global score was found to have adequate reliability. The present study underscored the value of a career development programme, based on a SCCT theoretical framework, for improving learners' CDMSE, despite the challenges that Grade 11 learners encounter as they prepare to make life-directing decisions. The development of strong, but realistic career self-efficacy competencies and outcome expectations serves as an important base from which South African young people can launch their careers.  They are enabled to identify interests and potentially satisfying careers and engage confidently with the barriers that may lie in their career paths. While the present study's findings lend further support to the notion of CDMSE being a malleable construct that can be enhanced during a six-week intervention, the additional needs of learners from low SES backgrounds were highlighted.

The results of this study are important in extending the evaluations of career interventions with learners from schools which are characterised by different socio-economic levels.  Identifying socio-economic barriers within school systems can increase the validity and reliability of career interventions within South Africa's diverse schooling system. It is a South African reality that educational resources are often limited in previously disadvantaged schools with

educators working under difficult conditions.  Indeed, learners from low socio-economic backgrounds are often faced with a range of challenges when making career decisions, for example, a scarcity of economic resources within their families, schools, and communities; and uncertainty regarding the confidence, competency and ability to succeed as they encounter a lack of accessible career role models (Albien, 2013). This study confirmed the strong relationship between adolescents' social environment, their self-efficacy beliefs, and their career development.

One of the most prominent academic problems plaguing today's teenage youth is a lack of motivation toward academic activities (Legault, Pelletier, & Green-Demers, 2006).  Given that academic motivation likely plays a key role in learning and academic performance, it is crucial to develop a better understanding of the determinants and barriers of academic motivation (Komarraju, Karau, & Ramayah, 2007).  At-risk youth do not typically view their futures with the same degree of optimism as compared to their affluent and socially privileged counterparts. Students are often unmotivated to learn because they do not perceive a meaningful connection between what they are being taught and what they value in terms of their future goals.   Thus, learners become bored and withdraw interest and effort from school, resorting to sources of self-esteem and a sense of control that results in school drop-out, behavioural misconduct and gang activity.

From a career development perspective, this study endeavoured to help the learners make the link between the value and purpose of school education and developing competence and motivation in planning for their futures. Locating a career development programme into the school curriculum can therefore play an important role in enhancing this developmental objective. Although the current study demonstrated varying results, it appears that extending the period of the programme may enhance this process of internalising academic motivation and self agency in the individual learner's career decision making self efficacy.

The relationship found between CDMSE and academic motivation validates interventions using these two constructs but further research is needed to establish the causal components in moderating this relationship.

Adolescence is a developmental period when vocational exploration becomes increasingly salient to their self-concept (Perry, 2009). With escalating unemployment, it is a crucial time in South Africa for career psychologists and researchers to find answers to the challenge of meeting the career development needs of South African adolescents. This study has provided empirical evidence that a CDMSE based career development programme can serve as an effective tool when assisting high school learners make informed decisions about their vocational future.

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# THE GAME PLAN: You can be the captain of your team

**APPENDIX A:  Career Intervention Programme**

Jean Miles

Counselling Psychologist

# INTRODUCTION

In approximately 6 terms time you will be leaving the gates of your high school and launching, from your childhood, into the adult phase of your life.  It is a quantum leap!  You will be leaving your school team and founding your own team.  You have 6 terms left to prepare your game plan before you step onto the field to play the game of life and take up the captaincy of your team.

THIS IS YOUR GAME  -  take charge.  Obviously a major part of the game is your career.

### *How much time are you currently investing in preparing your game plan?*

## Why should you bother?

- How long does the game take?  The game of life is 45 years or 88 200 working hours.  This is a long time to be unhappy in your work.

- Training and coaching is expensive.  Are you going to waste your money on further education for a career that does not satisfy you?

- You will need to provide financially for your team (family).

- Being unhappy in your work is ranked as one of the top 10 psychological environmental stressors.

- The decisions you make between 18 years and approximately 30 years of age are critical in defining your team!  You will choose your life partner; possibly plan a family, and very importantly, you will make career decisions.

### *Who will define your team?*
As a captain you can let other people mould it and shape it; or <u>you can take charge</u>!  It is actually very liberating and exciting to take ownership.

### *This programme is going to give you the ABC on how to successfully prepare and launch your career.*
We will cover 5 important sections to help you confidently take on your captaincy.



| Self-knowledge | World of work and further education | Goal selection and decision-making skills | Overcoming barriers | Planning |

# 1. SELF KNOWLEDGE

## *A SUCCESSFUL CAPTAIN KNOWS HOW HE/SHE IS WIRED*

*WHY? How does that link to helping you launch a successful and happy career?*

Each one of us is different and the configuration of our personalities; interests; and aptitudes make us unique.  A career profile forms a picture of who we are in relation to the world-of-work.  Career profiles align well to certain careers and poorly with others.

**Avoid being a square peg in a round hole!**

Let's explore your career profile by looking at the following:

1.1 My natural orientation to the world of work

1.2 My natural preferences

1.3 My natural talent

1.4 Matters that are important to me

1.5 Aspects of my life story

# 1.1 My natural orientation to the world of work

Let us start with looking at personality and interests as described by John Holland, an American psychologist who developed a very famous assessment called the Self-directed Search (SDS).

Do the SDS in Activity 2.  The results will be helpful to see how your wiring orientates to the different categories.  Additionally, it is valuable to identify your interests; that is, those things you enjoy doing.  Research shows that people who achieve in their careers are all involved in a field that they are interested in. Pursuing an interest does not require you to be good at or proficient in the activity although interests usually develop around the things you are good at.

# 1.2 My natural preferences

We all have natural preferences for certain modes of operation.  These impact how we are likely to deal with different situations; which environments we are most comfortable in; and where our natural strengths and weaknesses show. When considering career matters it is helpful to look at a combination of natural preferences to indicate the types of tasks which we would be more suited to perform.

Complete Activity 3 to assist you to identify your natural preferences.

# 1.3 My natural talent

***Everyone is a genius, but if you judge a fish on its ability to climb a tree, it will live its whole life believing that it is stupid.***

**Albert Einstein**

In today's world, we have moved on in our understanding of what it is 'to be clever'.  The *Multiple Intelligence Theory* developed by Howard Gardner states that we respond, <u>INDIVIDUALLY</u>, in different ways to different kinds of content. In other words, we all have areas that we are particularly talented in and these areas might not necessarily be based on how well we do at school.  To be satisfied and achieve in our careers, we should have the opportunity to do what we are good at.

## THE 7 DIFFERENT INTELLIGENCES:

**1. Linguistic:**
The ability to use language to describe events and sequence activities; to build trust and rapport; to develop logical arguments; to use expressive language.

<u>Examples of careers</u>:  journalist; technical writer; administrator; contractor; salesperson; counsellor; pastor; therapist; lawyer; professor; orator; philosopher; playwright; poet; advertising copywriter; and novelist.

**2. Logical-Mathematical:**
The ability to use numbers to compute, describe, and document; to apply mathematics in personal and daily life; to make conjectures, establish proofs and apply mathematics and data to construct arguments; and the ability to be sensitive to the patterns, symmetry, logic, and aesthetics of mathematics.

<u>Examples of careers</u>: accountant; bookkeeper; statistician; artisan; logistician; computer programmer; scientist; quantitative problem solver; engineer; inventor; and designer.

**3. Spatial:**
The ability to perceive and represent the visual-spatial world accurately; to arrange colour, line, shape, form, and space to meet the needs of others; to interpret and graphically represent visual or spatial ideas; and to transform visual or spatial ideas into imaginative and expressive creations.  .

Examples of careers:  illustrator; artist; guide; photographer; interior designer; painter; clothing designer; builder; artist; inventor; model builder; and cinematographer.

### 4. Bodily-Kinaesthetic:

The ability to use the body and tools to take effective action or to construct or repair; to critique the actions of the body; to appreciate the aesthetics of the body; and to use those values to create new forms of expressions.

Examples of careers:  mechanic; building contractor; craftsperson, took and dye maker; coach; counsellor; salesperson; trainer; physical educator; sports analyst; professional athlete; dance critic; sculptor; choreographer; actor, dancer; and puppeteer.

### 5. Musical:

The ability to understand and develop musical technique; to work together to use music to meet the needs of others; to interpret musical forms and ideas; and to create imaginative and expressive performances and compositions.

Examples of careers: music teacher; instrument maker; performer in a band, orchestra or choir; director of music; music critic; music collector; composer; conductor; and radio presenter.

### 6. Interpersonal:

The ability to organize people and to communicate clearly what needs to be done; to use empathy to help others and to sole problems; to discriminate and interpret among different kinds of interpersonal clues; and to influence and inspire others to work toward a common goal.

Examples of careers:  social worker; doctor; nurse; therapist; teacher; sociologist; psychologist; psychotherapist; consultant; charismatic leader; politician; and evangelist.

### 7. Intrapersonal:

The ability to assess one's own strengths, weaknesses, talents, and interests and use them to set goals; to use understanding of oneself to be of service to others; to form and develop concepts and theories based on an examination of oneself; to reflect on one's inner moods, intuitions, and temperament and to use them to create or express a personal vision.

Examples of careers:  planner; counsellor; social worker; psychologist; artist; and writer.

Do you know what your natural talents are? Identify your natural talents in Activity 4 by thinking back on your past performances and what you think you do well and what skills come easily to you.

# 1.4 Matters which are important to me

**Remember our natural talents need to be given opportunities to develop.**

To be happy in your career one day, your values have to fit with the career field in which you work.  Values are all the things that are important to us.  It is our beliefs and moral principles which determine how we understand the world; it is also about the lifestyle we value.

Example 1:  *Money* - If money is important to you and you value it, then you need to find a career where you will be well-paid.

Example 2:  *Status* - Is status important to you?  Did you choose to do Physical Science even though you are not interested in the subjects and struggle to understand the concepts taught?  Maybe you chose Science because of the subject's status.  If status is important to you, then you need to take this into account when choosing a career in order to experience career satisfaction.

Let's try and discover more about your values by completing Activity 5.

# 1.5 Aspects of my life story

As a Grade 11 learner, you have generally lived for 16 or more years - You have already started your life story!  These early chapters of your life story are a treasure trove of valuable information for guiding you with career exploration.

Complete Activity 6 to highlight specific aspects of your story which are important to developing your career path.

# REFLECTIONS ON MY WIRING

**DO ACTIVITY 7 by reflecting on the knowledge you have gained about yourself.**

**The goal of this first section is to <u>help</u> you in discovering how you operate as a person in relationship to the world of work.**

**Do not stop here!!  Remember to chat to your family and friends about the results.  Do they agree?  How do they see you?**

# 2. WORLD OF WORK AND FURTHER EDUCATION

## ...CCESSFUL CAPTAIN KNOWS ALL ABOUT THE GAME AND SEEKS EFFECTIVE COACHING

**Characteristics of the world of work you will be entering:**

- **High unemployment rates**

*Educational level of the unemployed April 2012 to March 2013 ('000).*

| Highest Level of Education | April – June 2012 | July – September 2012 | October – December 2012 | January – March 2013 |
|---|---|---|---|---|
| No Schooling | 66 | 73 | 66 | 68 |
| Less than primary completed | 294 | 319 | 319 | 287 |
| Primary completed | 196 | 208 | 201 | 169 |
| Secondary not completed | 2096 | 2246 | 2171 | 2209 |
| Secondary completed | 1498 | 1531 | 1447 | 1547 |
| Tertiary | 280 | 276 | 280 | 295 |
| Other | 40 | 15 | 17 | 26 |
| TOTAL | 4470 | 4668 | 4501 | 4601 |

- **Population growth**:  Our planet has to accommodate more people at an exponential rate.

- **Transformation of the world of work:**  Get used to change - Differences between the workplace of 2001 and 2020 will probably equal the differences between the workplace of 1800 and 2000. Few of us would try and predict with any certainty what the world of work would be like in 20 years time.

### So w*hen the music changes so must the dance…*

…This is so liberating and exciting, as long gone are the days when Grade 11 and 12's had to make a career decision which was more about choosing a career-box to hop into for the following 45 years of their lives. In fact, you probably need to be preparing for a job that does not exist and so **you need to be career seeking not job seeking**.  It is more about finding a career climbing frame to erect.  You need to begin a career journey that will facilitate your development and personal growth.  What one wants to avoid is erecting the wrong climbing frame and launching your career from the wrong launch pad.

# WHERE TO START?

It is very important to find out as much as possible about different careers that interest you.  *If you want to be a chartered accountant, find out exactly what they do before you spend 7 years training to be one*!

To try make sense of the approximately 20 000 identifiable careers, it is easier to use **career fields** as a starting point.  The career fields are as follows:

2.1  Creative

2.2  Business

2.3  Engineering and the Built Environment

2.4  Health Science
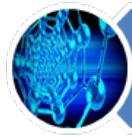
2.5  Natural Science

2.6  Social Science

2.7  Law

# 2.1 Creative

Examples:
- language and communication
- performing arts
- Chef
- Graphic design/visual arts
- Dance
- Landscape design
- Photography
- Music
- Creative Marketing

# 2.2 Business

Examples:
- Sport
- IT
- Administration
- Chartered Accountant
- Retailer
- HR and PR
- Marketing

# 2.3 Engineering and the Built Environment

Examples:
- Trades
- Mining
- Electrical, Chemical, Mechanical, Industrial, Mechatronics, Computer Engineering
- Geomatics
- Construction
- Quantity Surveying
- Administration

# 2.4 Health Sciences

Examples:
- Medical Doctors and Dentistry
- Allied Health – dietitians, physiotherapists, occupational therapists, speech therapists, optometrists, psychologists, social workers
- Nursing
- Alternative Health Service Providers

# 2.5 Natural Sciences

Examples:
- Chemistry
- Physics
- Biology
- Geography
- Agriculture and Environment

# 2.6 Social Sciences

Examples:
- Language
- Communication
- Hospitality
- Tourism
- Education and Community Service
- Applied and Visual Art
- Sport
- Psychologists
- Social Workers
- Human Resource Management

# 2.7 Legal

**Examples:**
- Lawyer
- Advocate
- Law Enforcement and Protective Services
- Administration

# SOURCES OF CAREER INFORMATION

Career books and the following websites:
www.gostudy.mobi
www.careers24.com
www.careers.co.za

Do Activity 8 where you can start to make connections between career fields and personal profiles.  Where do you fit best?

# WHAT ARE THE OPTIONS AVAILABLE TO YOU ONCE YOU HAVE COMPLETED GRADE 12?

**There are 2 basic options to follow once you have matriculated:**

OPTIONS

STUDY

NOT STUDY

A) UNIVERISTY

FIND A JOB

B) UNIVERISTITY OF TECHONOCLOGY

START YOUR OWN BUSINESS

C) FET COLLEGE

UNEMPLOYED

D) PRIVATE INSTITUTION

E) LEARNERSHIP OR APPRENTICESHIP
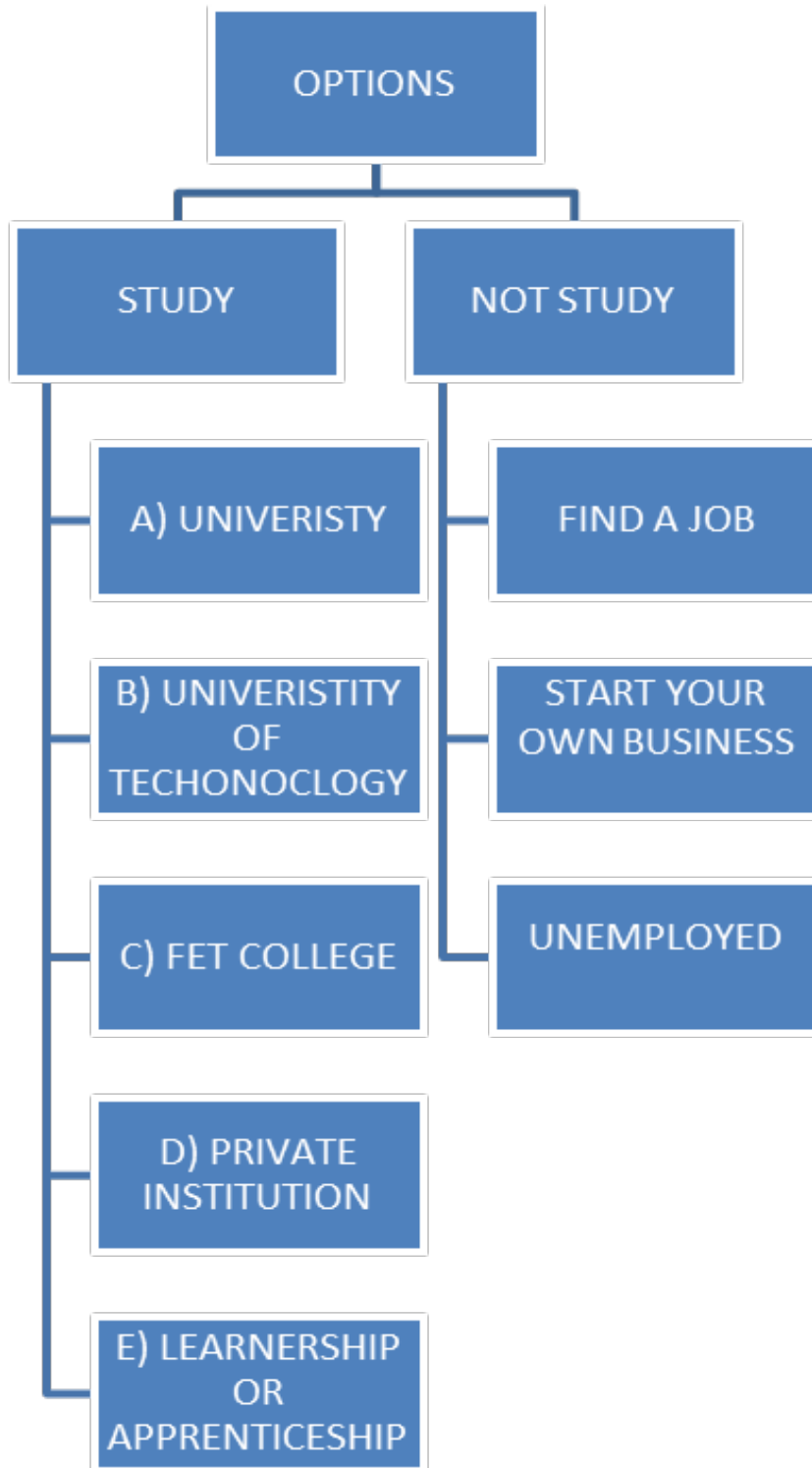
# THE STRUCTURE OF HIGHER EDUCATION AND TRAINING IN SOUTH AFRICA

**In South Africa we have three types of universities:**

| Type of University | Description | Examples |
|---|---|---|
| **A)  Traditional** | Traditional academic institutions | • Stellenbosch University<br>• University of Cape Town<br>• Rhodes University |
| **B)  Universities of Technology** | Formerly known as technikons.  They offer National Diplomas which can be converted to Technological Degrees. | • Durban University of Technology<br>• Cape Peninsula University of Technology<br>• Tshwane University of Technology |
| **Comprehensive Universities** | New institutions that are a combination of a traditional university and university of technology.  They offer both diplomas and degrees. | • Nelson Mandela University of Technology  (Used to be University of Port Elizabeth and Port Elizabeth Technikon)<br>• University of Johannesburg |

*TRADITIONAL UNIVERSITY DEGREE STRUCTURE:*
*Bachelor's degree → Honour's degree → Master's degree → Doctoral degree*

# TRADITIONAL UNIVERSITY QUALIFICATIONS

## The following is a general configuration of the organization of faculties and qualifications at universities:

| CAREER FIELD AND FACULTY | DEGREE NAME | CAREERS | SUBJECT CHOICE | COMPULSORY GRADE 12 SUBJECTS |
|---|---|---|---|---|
| **Arts and Social Sciences** | BA<br>BSocSci | Flexible qualification | Music, Languages, Drama, Social Work, Psychology, Sociology, Anthropology, Journalism, Sport Science, Theatre Studies, History, Political Science | |
| **Health Science** | MBChB<br>BChD<br>BCur<br>BSc<br>BSc<br>BSc<br>BSc<br>BOT<br>BOptometry<br>BRad | Medical Doctor<br>Dentist<br>Nurse<br>Dietitian<br>Physiotherapist<br>Speech Therapist<br>Audiologist<br>Occupational Therapist<br>Optometry<br>Radiographer | Set curriculum | Mathematics<br>Physical science<br>Life Sciences |
| **Science (Natural and Agric Sciences)** | BSc | Flexible qualification | Physics, Chemistry, Biochemistry, Entomology, Agriculture, Food Sciences, Microbiology, Botany, Astrophysics, Zoology, Geography, Geology, Environmental Sciences, Information Technology, Genetics, Plant Sciences, Animal Sciences, Forensic Sciences, Physiology, Meteorology, | Mathematics<br>Physical science |
| **Engineering and Built Environment** | BEng<br><br>BSc | Civil; Industrial; Chemical; Mining; Computer; Electronic; Electrical; Mechatronics; Biomedical and Metallurgical<br><br>Construction management<br>Quantity Surveying<br>Geomatics | Set curriculum | Mathematics<br>Physical science |
| **Education** | BEd | Foundational Phase Teacher<br>Intermediate Phase Teacher<br>Senior and FET Phase Teacher | Set curriculum | |
| **Commerce (Economic Management Sciences)** | BCom<br>BBusSci | | Economics, Human Resource Management, Marketing, Law, Accounting, Business Management, Information Systems, Computer Science<br>Industrial Psychology, Financial Planning | Mathematics (except at NMMU) |
| **Law** | LLB | Lawyer, Advocate | Depending on Faculty | |
| **Veterinary Science** | BVSc | Veterinary Surgeon | Set curriculum | Mathematics<br>Physical Science<br>Life Sciences |

# UNIVERSITY OF TECHNOLOGY QUALIFICATIONS

## National Diplomas offered in South Africa:

### Faculty of Arts and Design
Drama
Dance
Fashion
Fine Art
Ceramic Design
Textile Design and Technology
Graphic Design
Interior Design
Jewellery Design and Manufacture
Journalism
Language Practice
Photography
Translation and Interpreting Practice
Video Technology
Film and Television Production
Musical Theatre
Music
Photography

### Faculty of Health Sciences
Biomedical Technology
Child and Youth Development
Chiropractic (Have to go to Master's level)
Clinical Technology
Dental assisting
Dental Technology
Nursing
Emergency Medical Care
Environmental Health
Homeopathy (Have to go to Master's level)
Medical Orthotics and Prosthetics
Nursing Science
Radiography
Somatology
Optical Dispensing

### Faculty of Applied Sciences/ Science
Analytical Chemistry
Biotechnology
Polymer Technology
Chemical Process Technology
Clothing Management
Consumer Sciences:  Food and Nutrition
Horticulture
Maritime Studies
Sport Management
Textile Technology
Agriculture: Animal Production; Commercial Mixed Farming; Crop Production;
              Development and Extension
Equine Science
Fire Technology
Game Ranch Management
Geology
Landscape Technology
Nature Conservation
Radiography
Sport and Exercise Technology
Veterinary Technology
Wood Technology
Forestry
Mathematical Technology
Oceanography

**Faculty of Engineering and the Built Environment**

Architectural Technology
Building
Cartography
Engineering: Civil /Computer Systems/ Electrical/ Industrial/ Mechanical/Chemical/
                    Mechatronics/Metallurgy/Three-dimensional Design
Pulp and Paper Technology
Surveying
Town and Regional Planning

**Faculty of Business/Accounting and Informatics/Economics and Finance**

Accounting
Cost and Management
Internal Auditing
Taxation
Financial Information Systems
Information Technology
Logistics
Library and Information Studies
Office Management and Technology
Printing Management
Real Estate

**Faculty of Management Sciences**

Catering Management
Ecotourism Management
Hospitality Management
Human Resource Management
Management
Marketing
Operations Management
Public Management
Public Relations Management
Retail Business Management
Tourism Management
Recreation Management
Sport Management
Event Management
Adventure Tourism Management
Contact Centre Management
Credit Management
Entrepreneurship

**Faculty of Information and Communications Technology**

Engineering – Computer Systems
Information Technology - Business Applications
                         - Communications Networks
                         - Intelligent Industrial Systems
                         - Multimedia
                         - Software Development
                         - Support Services
                         - Technical Applications
                         - Web and Application
                            Development

**Education**
Bachelor of Education is offered at many universities of technology.

# FET (FURTHER EDUCATION TRAINING) COLLEGES

FET Colleges provide training for a specific trade or vocation.

<u>Part-time Post-matric Courses offered at Buffalo City FET College in East London :</u>

*A Grade 12 or N3 Certificate is required.*

National (N) Certificate in Business Management
National Certificate in Financial Management
National Certificate in Human Resources Management
National Certificate in Management Assistant
National Certificate in Marketing Management
National Certificate in Public Management

*The N Certificate can be obtained after completing two semesters of part-time study per year.  The National Certificate can be converted to a National Diploma after eighteen months experience in commerce and industry where the student has practically implemented any two of the subjects studied in his / her national certificate.*

National Certificate in Engineering Studies: Civil Engineering
                                                                        Electrical Engineering
                                                                        Mechanical Engineering

*Compulsory Subject requirements:  Mathematics and Physical Science*
*The course takes six trimesters. After the completion of the course, the student has to go for in-service training in an industry related to the study for 2 years in order to qualify.*

# PRIVATE INSTITUTIONS

There are approximately 100 private higher education institutions, which offer education and training in fields such as information technology, management studies, secretarial studies, public relations and marketing, communications, religion, beauty and skincare, and design.

***Be a discerning customer – check the value of the qualifications by finding out where their graduates have got work.***

# LEARNERSHIPS OR APPRENTICESHIPS

Studying after school is no longer confined to universities or universities of technology.  The government has instituted Sector Education and Training Authorities (SETA's) who manage and control learnerships and apprenticeships.

## WHAT IS AN APPRENTICESHIP?

The apprenticeship system is a technical training system which includes practical and theoretical training in designated trades to achieve artisan status.  A contract is signed between an employer and an employee and requires the learner to work for the employer, in return for earning a monthly allowance while being trained.  The apprentice is registered with a SETA on an NQF artisan trade qualification and spends between 2 to 4 years on a single apprenticeship contract linked to a competency based modular learning programme that concludes with a trade test.  Practical training schedules are completed as well as some form of theoretical training from a technical training centre or at a FET College.  Upon passing a trade test the person is awarded with a National Trade Certificate and will be recognised as an artisan.

This pathway has one entry and one exit point.  A person will get their certification as an artisan at the end of a single contract period and after the successful completion of a trade test.

## WHAT IS A LEARNERSHIP?

A person registers with a SETA on an NQF artisan trade qualification and spends between 2 to 4 years on a multi learnership year contract.  It is a combination of structured theoretical learning and work-based education programme between an employer, training provider and learner.  A tripartite learnership agreement is signed between the three parties.  The employer funds the learnership and the employer and training provider provide the learner with relevant learning and experience.  The learner is assessed by a qualified assessor and monitored and

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verified by the relevant SETA.  Upon successful completion of the learnership a National Qualification is awarded to the learner.

This pathway has multi entry and multi exit points.  A person will get their certification after each completed contract period.  Registration as an artisan will only occur after successful completion of a trade test.

***NOTE OF CAUTION: Although you earn while you learn, do not take this option merely for financial reasons.***

Examples of Trades:
Automotive Electrician
Automotive Body Repairer (Panel beater)
Automotive Engine Fitter
Automotive Machinist
Automotive Trimmer
Diesel Fuel Injection Mechanic
Diesel Mechanic
Fitter and Turner
Motor Mechanic
Motorcycle & Scooter Mechanic
Spray Painter
Tool, Jig and Die Maker
Tractor Mechanic
Vehicle Body Builder
Welder
Refrigeration Mechanician
Millwright
Boilermaker
Electronics Equipment Mechanician
Telecommunications Mechanician

# *SKILLS PROGRAMME*

Skills programmes are offered by accredited training providers where learners gain practical skills and experience in certain components of a trade.  Upon completion of the course, the learner gains credits towards a qualification registered on the National Qualification Framework (NQF).

***"Opportunity is missed by most people because it is dressed in overalls and looks like work"  Thomas Edison***

# HOW DO I GET ACCEPTED INTO ONE OF THESE INSTITUTIONS?

A South African reality is that there is an oversubscription to universities and FET colleges.  There are three requirements that must be met to qualify to study at one of these institutions:

1. **Meet statutory minimum requirements:**
   a. Bachelor's degree: Pass NSC with a minimum achievement level of 50% in four subjects from the designated list.
   b. National Diploma: Pass NSC with a minimum achievement level of 40% in four subjects from the designated list.
   c. National Certificate: Pass NSC with a minimum of 30% in the language of learning and teaching of higher education institution.

2. **Specific subject requirements**

3. **Admission points systems (APS) and National Benchmark Tests (NBT's) or Access Tests**

Do Activity 9 to assess how far your current academic performance and subject choice will get you.

# 3. GOALS AND DECISION MAKING

## *A SUCCESSFUL CAPTAIN MAKES WISE DECISIONS*

The pace of change in the world-of-work makes it fairly difficult to set long-term careers goals, in fact, research has shown that people change careers approximately five times during a lifetime.

The first step to your team's career success is to **set a five-year career goal** determining primarily your post-matric education.

Remember that your values indicate what lifestyle you would like, so do not forget to stay true to your values when setting your career goals as your occupation will play an important part in the achievement of these values.

### Key ingredients of the decision-making process:

- Know your choices: imagine trying to choose subject choice in Grade 9 if you didn't know what subjects the school was offering.
- Request information from universities or seek this information on their websites.
- Make comparisons of the courses and facilities offered by different institutions.
- Check content of the courses you are considering.
- Look for work-shadowing opportunities.
- Talk to people in the field you are investigating and develop questions to ask them, for example:
    - o What do you do in a typical work day?
    - o What do you like about the job?
    - o What do you dislike about the job?
    - o What training is necessary for the job?
    - o What is the career scope in this job?
- Make decisions that will place you in a field that aligns well with your career profile.  Will this choice foster your personal growth and self-worth?
- Make sure you have a back-up plan.
- Visit the educational institutions you are interested in.
    - o A university has an ethos and you need to check if it suits you.
    - o The cost of travelling to campuses is cheaper than studying the wrong course.
    - o Would you prefer a big city campus to a small town campus?
    - o How close do you want to be to home?

# 4. BARRIERS TO CAREER DEVELOPMENT

## A SUCCESSFUL CAPTAIN RISES TO CHALLENGES BY FINDING SOLUTIONS

***Career barriers can promote or inhibit your career path.***
Let's look at three possible factors:

## ECONOMIC FACTORS

Lack of finances should never be a reason to not study further as there **is** money out there for those willing to put in the necessary time and effort required to get it.

The first step to addressing the issue is to determine exactly how much you are going to need.

This checklist of costs might be helpful:

- ✓ Tuition Fees
- ✓ Books
- ✓ Place to live
- ✓ Stationery
- ✓ Transport
- ✓ Food
- ✓ Entertainment

## THERE ARE A NUMBER OF SOURCES OF FINANCES AVAILABLE TO STUDENTS:

- **Scholarships** – financial assistance awarded for outstanding academic achievement.
- **Bursaries** – financial assistance given to a student with good academic achievement.  'Financial needs' basis could also play a role. Some bursaries have conditions attached to them, for example, you have to work for the company once you have completed your studies.
- **Financial Aid Offices at the institution** - Apply for financial assistance at the relevant university's Financial Aid Office or Student Support Centre. The staff at these offices will explain what funds are available and how to go about applying for them.  A Means Test is used to assess your family's financial situation in order to assess your eligibility for financial aid.

- **Government loan/bursary** – National Student Financial Aid Scheme (NSFAS) is a loan with a very low interest rate that is repayable only once you have completed your studies and started to work.  If the student performs well, up to 40% of the loan is converted into a bursary. Apply for a NSFAS loan through the Financial Aid Office of the relevant institution.
- **Study Loans** – Loans are available through banks against an interest rate.  You need to have a guarantee to secure the loan which is repaid after the completion of your studies.
- **You can study part-time or work part-time in order to finance your studies.**
- **Financial merit awards** are given at some universities based solely on your final matric marks.  Some students have their entire tuition costs covered through this scheme.  Are you making an important connection? MARKS ARE MONEY!
- **Learnerships or Apprenticeships –** Earn while you learn.


## SEARCH THE INTERNET FOR A SCHOLARSHIP OR A BURSARY.

**WEBSITE EXAMPLES:**
- ✓ CAREER WISE
- ✓ GO STUDY


## TRUE LIFE STORIES:

### Sashen Govender's story:

*I am currently a third year graphic design student at D.U.T.  I intend to become a successful graphic designer for a major design firm in South Africa.  The UTI bursary has been a major asset in my studies.  Without it, I would not be able to follow my dreams.*

### Chanelle de Chaza's story:

*I am a first year student studying Occupational Therapy at UCT.  Growing up in a small town, I always knew that I would someday like to go to university.  My desire to acquire a tertiary education was also largely influenced by the way I had grown up watching my parents struggle with finances:  having to borrow money to make ends meet, winding up in debt and having to live with my grandparents as we could not afford a place of our own.  My older sister and I had received financial assistance all throughout primary school and we had to work hard to obtain full academic scholarships that would ensure our high school tuition.  Our financial situation therefore rendered my parents unable to even consider payment for tertiary education.  Having being granted the Oppenheimer Memorial*

*Trust scholarship has therefore provided me with an opportunity that I would have otherwise never experienced.*

*I now have the chance to further my education and to transform my dream of helping others into a reality.  Thanks to the Oppenheimer Memorial trust I now finally have the chance to participate in activities I could only previously had dreamed of!  It is almost surreal that I'm actually here attending the finest institution in Africa.  I believe that I have been truly blessed and I will forever be grateful for this amazing experience!*

## TIPS FOR COMPLETING BURSARY APPLICATIONS:

- **Be organized.** Don't wait until the last minute to start looking for bursaries and scholarships. Applications generally open in the first semester of the year.
- **Pay attention to detail and follow their rules as set out:** Requirements for filling in application forms and writing essays can be very different so pay attention to small detail. Read all of the information and instructions carefully and make sure you meet the criteria. Why get thrown out over a technicality?

## SOCIO-POLITICAL FACTORS

Yes! It can be tricky as a woman progressing in her career and, Yes! South Africa has a range of racially discriminatory issues and systems.  BUT there are plenty of examples of successful women in the market place and plenty of examples of ALL South Africans (irrespective of race) achieving in their careers.

A good team always has good support.  Draw on community support and network amongst family and friends.  Work collaboratively with your parents.

## ACADEMIC CHALLENGE

View academic challenges as a sign of educational and personal growth. Tertiary institutions do not just hand out qualifications.  Imagine studying and not experiencing academic difficulties!  In fact, expect academic struggle as part of the process.

**What to do in the event of academic struggle?**
- Stop!  Assess the situation and strategize. You might have to re-structure your study methods.
- Most institutions have a range of academic support systems in place to assist students.  Use these systems – you (or your parents) are paying for the service.

# 5. CAREER PLANNING

## *A SUCCESSFUL CAPTAIN CONTROLS THE MATCH PLAN BY TAKING RESPONSIBILITY AND EFFECTIVE PLANNING*

## A CAREER PLAN SHOULD INCORPORATE THE FOLLOWING SECTIONS:

- *Career Goals*

- *High School Educational Achievements versus Tertiary Education Requirements*

- *Check university websites for application closing dates*

- *Plan to reach Career Goals*

- *Budget*

## EMPLOYMENT PROSPECTS

**"A degree is no longer a meal ticket, but merely a license to hunt"**

Employers employ people **_not_** degrees or diplomas so remember your qualification alone will not get you a job.  Update yourself with market trends by checking average yearly earnings and employment trends in South Africa on the following websites:

www.salaryexplorer.com
www.labour.gov.za

**BE PRO-ACTIVE** – you are the package, learn to give yourself a marketable brand.

# A WAY TO GET YOUR FOOT IN THE DOOR IS TO HAVE A GOOD CURRICULUM VITAE OR RESUME

A resume is a one or two page summary of your skills, experience and education, and a CV is longer, at least two pages, and is more detailed.

When writing a CV it's important to include all the right information so the hiring manager can see, at first glance, why you are a strong candidate for the job. A well written resume or CV will help you secure a job interview.  CV and resume writing techniques should not be thought of as correct or incorrect, but rather as effective or ineffective. Effectively written resumes assist us in getting the interviews we want.

The following information should be included:

1.  Cover letter: this is the letter that you attach to your CV when applying for a job.  It gives the reader a good indication of your personality, writing ability and communication skills.

2.  General Information: Name

> Contact Details
>
> Date of Birth
>
> Marital Status
>
> Driver's License

3.  Education: List your qualifications and institutions where obtained, starting with the most recent.

4.  Work Experience:  Give an account of any work experience.

5.  Skills acquired:  State any skills that you are able to offer.

6.  Accomplishments:  Include noteworthy tasks and projects you have done.

Use a resume or CV template or sample as a starting point for creating your own CV/resume. Add your information to the template, then tweak and edit it to personalize it, so it highlights your skills and abilities.

**Go to *http://jobsearch.about.com/od/resumetemplates/a/templatehs.htm* for further guidance in writing up a CV or resume.**

# INTERVIEWS FOR A JOB, BURSARY, LOAN OR ENTRANCE INTO CERTAIN ACADEMIC PROGRAMMES

### *BE PREPARED!*

### *Chance favours the prepared mind*
### *– Louis Pasteur*

- Research the company or institution beforehand by visiting their company website.  Review the company mission statement and company history, products and services, management, as well as information about the company culture.  Social Media and sites like LinkedIn  can be useful to get company updates, for example, people recently employed,  promotions, jobs posted, and company statistics.  Take a look at your interviewer's profile to get insight into their job and their background.

- G*lassdoor's [Interview Questions and Reviews](#)* offers sample interview questions for a range of positions and interview advice.

- If you know someone who works for the company ask them for advice and insight into the company dynamics.

- The first impression you make on a potential employer can make a big difference, therefore, dress appropriately for the interview.

- Ask questions to show interest in the position.

- Non-verbal communication accounts for 90% of communication.  Be aware of your body language, for example, convey energy and enthusiasm in the tone of your voice.  Avoid crossing your arms and being fidgety.

- Keep your answers succinct, to-the-point and focused and don't ramble, simply answer the question.

Career planning is ongoing.

### *Best wishes for your final preparations to launch your personal teams.*

## APPENDIX B: Letters of consent to learners

UNIVERSITEIT·STELLENBOSCH·UNIVERSITY
jou kennisvennoot • your knowledge partner

**STELLENBOSCH UNIVERSITY**
**CONSENT TO PARTICIPATE IN RESEARCH**

## THE IMPACT OF A CAREER DEVELOPMENT PROGRAMME ON THE CAREER SELF-EFFICACY AND ACADEMIC MOTIVATION OF GRADE 11 LEARNERS FROM DIVERSE SOCIOECONOMIC BACKGROUNDS

## LEARNER'S CONSENT FORM: CONTROL GROUP

You are asked to participate in a research study conducted by Jean Miles, from the Psychology Department at Stellenbosch University.  The results will be used in the researcher's doctoral thesis. You were selected as a possible participant in this study because you are currently a Grade 11 learner in East London.

### 1.  PURPOSE OF THE STUDY

The study aims to measure the impact of a group oriented career development intervention on career self-efficacy and academic motivation of Grade 11 learners from diverse socioeconomic backgrounds.

### 2.  PROCEDURES

If you volunteer to participate in this study, we would ask you to do the following things:

- Complete a biographical questionnaire
- Complete two questionnaires related to career decision making and academic motivation on three occasions, namely, at the commencement of the study; six weeks later; and then eight weeks later.

### 3. POTENTIAL RISKS AND DISCOMFORTS

There are no anticipated risks or discomforts to the subjects.

### 4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

The career development programme will be offered to the subjects who form the control group at the completion of the study.  This will enable you to gain knowledge related to career matters and information that would enhance your self-knowledge.

The programme will hopefully contribute information to the development of a group oriented career programme that would assist Grade 11 learners with career decisions and enhance their academic motivation.

## 5.  PAYMENT FOR PARTICIPATION

Subjects will not receive payment for participating in the research.

## 6.  CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by using the following procedures:
- Participants will be identified by number rather than name for record keeping purposes
- A security password will be used to access data on the researcher's personal computer
- Data will be kept off the school premises

## 7.  PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not.  If you volunteer to be in this study, you may withdraw at any time without consequences of any kind.  You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

## 8.  IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact the researcher, Mrs Jean Miles at 043-7351574.

## 9.  RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty.  You are not waiving any legal claims, rights or remedies because of your participation in this research study.  If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

## SIGNATURE OF RESEARCH SUBJECT

The information above was described to me by Mrs Jean Miles in English and I am in command of this language.   I was given the opportunity to ask questions and these questions were answered to my satisfaction.

I hereby consent voluntarily to participate in this study. I have been given a copy of this form.

_____

## Name of Subject

_____                      _____

## Signature of Subject
## Date

## SIGNATURE OF INVESTIGATOR

I declare that I explained the information given in this document to _____

He/She was encouraged and given ample time to ask me any questions. This conversation was

conducted in English and no translator was used.

_____          _____

## *Signature of Investigator*                              *Date*

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**CONSENT TO PARTICIPATE IN RESEARCH**

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## THE IMPACT OF A CAREER DEVELOPMENT PROGRAMME ON THE CAREER SELF-EFFICACY AND ACADEMIC MOTIVATION OF GRADE 11 LEARNERS FROM DIVERSE SOCIOECONOMIC BACKGROUNDS

### LEARNERS' CONSENT FORM: INTERVENTION GROUP

You are asked to participate in a research study conducted by Jean Miles, from the Psychology Department at Stellenbosch University.  The results will be used in the researcher's doctoral thesis. You were selected as a possible participant in this study because you are currently a Grade 11 learner in East London.

**1. PURPOSE OF THE STUDY**

The study aims to measure the impact of a group oriented career development intervention on career self-efficacy and academic motivation of Grade 11 learners from diverse socioeconomic backgrounds.

**2. PROCEDURES**

If you volunteer to participate in this study, we would ask you to do the following things:

- Complete a biographical questionnaire
- Complete two questionnaires related to career decision making and academic motivation on three occasions, namely, at the commencement of the study; six weeks later; and then eight weeks later.
- Attend a career development programme which comprises 6 one-and-a-half hour sessions during the school morning.

**3. POTENTIAL RISKS AND DISCOMFORTS**

There are no anticipated risks or discomforts to the subjects.

**4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY**

The programme will enable you to gain knowledge related to career matters and information that would enhance your self-knowledge.

The programme will hopefully contribute information to the development of a group oriented career programme that would assist Grade 11 learners with career decisions and enhance their academic motivation.

**5.  PAYMENT FOR PARTICIPATION**

Subjects will not receive payment for participating in the research.

**6.  CONFIDENTIALITY**

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by using the following procedures:
- Participants will be identified by number rather than name for record keeping purposes
- A security password will be used to access data on the researcher's personal computer
- Data will be kept off the school premises

**7.  PARTICIPATION AND WITHDRAWAL**

You can choose whether to be in this study or not.  If you volunteer to be in this study, you may withdraw at any time without consequences of any kind.  You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

**8.  IDENTIFICATION OF INVESTIGATORS**

If you have any questions or concerns about the research, please feel free to contact the researcher, Mrs Jean Miles at 043-7351574.

**9.  RIGHTS OF RESEARCH SUBJECTS**

You may withdraw your consent at any time and discontinue participation without penalty.  You are not waiving any legal claims, rights or remedies because of your participation in this research study.  If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

| SIGNATURE OF RESEARCH SUBJECT |
|---|

The information above was described to me by Mrs Jean Miles in English and I am in command of this language.   I was given the opportunity to ask questions and these questions were answered to my satisfaction.

I hereby consent voluntarily to participate in this study. I have been given a copy of this form.

_____

## Name of Subject

_____                          _____

## Signature of Subject
## Date

| SIGNATURE OF INVESTIGATOR |
|---|

I declare that I explained the information given in this document to _____

He/She was encouraged and given ample time to ask me any questions. This conversation was

conducted in English and no translator was used.

_____                          21 February 2014

## *Signature of Investigator*                                          *Date*

**APPENDIX C:  Letters of consent to parents**

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**CONSENT TO PARTICIPATE IN RESEARCH**

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# THE IMPACT OF A CAREER DEVELOPMENT PROGRAMME ON THE CAREER SELF-EFFICACY AND ACADEMIC MOTIVATION OF GRADE 11 LEARNERS FROM DIVERSE SOCIOECONOMIC BACKGROUNDS

## PARENTS' CONSENT FORM: CONTROL GROUP

Your son/daughter has been asked to participate in a research study conducted by Jean Miles, from the Psychology Department at Stellenbosch University.  The results will be used in the researcher's doctoral thesis. Your son/daughter was selected as a possible participant in this study because he/she is currently a Grade 11 learner in East London.

### 1.  PURPOSE OF THE STUDY

The study aims to measure the impact of a group oriented career development intervention on career self-efficacy and academic motivation of Grade 11 learners from diverse socioeconomic backgrounds.

### 2.  PROCEDURES

If your son/daughter volunteer to participate in this study, we would ask them to do the following things:

- Complete a biographical questionnaire
- Complete two questionnaires related to career decision making and academic motivation on three occasions, namely, at the commencement of the study; six weeks later; and then eight weeks later.

### 3. POTENTIAL RISKS AND DISCOMFORTS

There are no anticipated risks or discomforts to the subjects.

### 4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

The career development programme will be offered to your son/daughter at the completion of the study.  This will enable him/her to gain knowledge related to career matters and information that would enhance his/her self-knowledge.

The programme will hopefully contribute information to the development of a group oriented career programme that would assist Grade 11 learners with career decisions and enhance their academic motivation.

## 5.  PAYMENT FOR PARTICIPATION

Subjects will not receive payment for participating in the research.

## 6.  CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with your son/daughter will remain confidential and will be disclosed only with their permission or as required by law. Confidentiality will be maintained by using the following procedures:
- Participants will be identified by number rather than name for record keeping purposes
- A security password will be used to access data on the researcher's personal computer
- Data will be kept off the school premises

## 7.  PARTICIPATION AND WITHDRAWAL

Your son/daughter can choose whether to be in this study or not.  If he/she volunteers to be in this study, he/she may withdraw at any time without consequences of any kind.  He/she may also refuse to answer any questions he/she does not want to answer and still remain in the study. The investigator may withdraw your son/daughter from this research if circumstances arise which warrant doing so.

## 8.  IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact the researcher, Mrs Jean Miles at 043-7351574.

## 9.  RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue your son/daughter's participation without penalty.  You are not waiving any legal claims, rights or remedies because of your son/daughter's participation in this research study.  If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

**SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE**

The information above was described to me by Mrs Jean Miles in English and I am in command of this language.  I was given the opportunity to ask questions and these questions were answered to my satisfaction.

I hereby consent voluntarily for my son/daughter to participate in this study. I have been given a copy of this form.

_____

## Name of Subject's Parent

_____          _____

## Signature of Subject's Parent
## Date

**SIGNATURE OF INVESTIGATOR**

I declare that I explained the information given in this document to _____

He/She was encouraged and given ample time to ask me any questions. This conversation was

conducted in English and no translator was used.

_____          _____

## *Signature of Investigator*                    *Date*

**STELLENBOSCH UNIVERSITY**
**CONSENT TO PARTICIPATE IN RESEARCH**

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## THE IMPACT OF A CAREER DEVELOPMENT PROGRAMME ON THE CAREER SELF-EFFICACY AND ACADEMIC MOTIVATION OF GRADE 11 LEARNERS FROM DIVERSE SOCIOECONOMIC BACKGROUNDS

### PARENTS' CONSENT FORM: INTERVENTION GROUP

Your son/daughter has been asked to participate in a research study conducted by Jean Miles, from the Psychology Department at Stellenbosch University. The results will be used in the researcher's doctoral thesis. Your son/daughter was selected as a possible participant in this study because he/she is currently a Grade 11 learner in East London.

### 1. PURPOSE OF THE STUDY

The study aims to measure the impact of a group oriented career development intervention on career self-efficacy and academic motivation of Grade 11 learners from diverse socioeconomic backgrounds.

### 2. PROCEDURES

If your son/daughter volunteer to participate in this study, we would ask them to do the following things:

- Complete a biographical questionnaire
- Complete two questionnaires related to career decision making and academic motivation on three occasions, namely, at the commencement of the study; six weeks later; and then eight weeks later.
- Attend a career development programme which comprises 6 one-and-a-half hour sessions during the school morning

### 3. POTENTIAL RISKS AND DISCOMFORTS

There are no anticipated risks or discomforts to the subjects.

**4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY**

The programme will enable your son/daughter to gain knowledge related to career matters and information that would enhance their self-knowledge.

The programme will hopefully contribute information to the development of a group oriented career programme that would assist Grade 11 learners with career decisions and enhance their academic motivation.

**5.  PAYMENT FOR PARTICIPATION**

Subjects will not receive payment for participating in the research.

**6.  CONFIDENTIALITY**

Any information that is obtained in connection with this study and that can be identified with your son/daughter will remain confidential and will be disclosed only with their permission or as required by law. Confidentiality will be maintained by using the following procedures:
- Participants will be identified by number rather than name for record keeping purposes
- A security password will be used to access data on the researcher's personal computer
- Data will be kept off the school premises

**7.  PARTICIPATION AND WITHDRAWAL**

Your son/daughter can choose whether to be in this study or not.  If he/she volunteers to be in this study, he/she may withdraw at any time without consequences of any kind.  He/she may also refuse to answer any questions he/she does not want to answer and still remain in the study. The investigator may withdraw your son/daughter from this research if circumstances arise which warrant doing so.

**8.  IDENTIFICATION OF INVESTIGATORS**

If you have any questions or concerns about the research, please feel free to contact the researcher, Mrs Jean Miles at 043-7351574.

**9.  RIGHTS OF RESEARCH SUBJECTS**

You may withdraw your consent at any time and discontinue your son/daughter's participation without penalty.  You are not waiving any legal claims, rights or remedies because of your son/daughter's participation in this research study.  If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

**SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE**

I hereby consent voluntarily for my son/daughter to participate in this study. I have been given a copy of this form.

_____

## Name of Subject's Parent

_____          _____

## Signature of Subject's Parent
## Date

**SIGNATURE OF INVESTIGATOR**

_____          _____

## *Signature of Investigator*                    *Date*

**APPENDIX D: Biographical Questionnaire**

# <u>BIOGRAPHICAL QUESTIONNAIRE</u>

Please answer the following questions which will be treated with confidentiality:

1. Name…………………………………..

2. Date of birth……………………………..

3. Current age…………………………….

4. Gender…………………………………..

5. Home language…………………………

6. School……………………………………

7. Father's level of education…………….

8. Father's occupation…………………….

9. Mother's level of education……………

10. Mother's occupation……………………

Thank you.

Jean Miles

## APPENDIX E:  CDMSES-SF

### Career Decision Making Self-Efficacy Scale

*Directions:*    *For each statement below, please read carefully and indicate how much confidence you have that you could accomplish each of these tasks by circling the appropriate number under the question, using the answer key below.*

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| No Confidence at all | Very little Confidence | Moderate Confidence | Much Confidence | Complete Confidence |

*Example: How much confidence do you have that you could:*
Summarize the skills that you have developed in the jobs you have held?
    1          2          3          4          5
If your answer was "Moderate Confidence," you would circle number 3.

### HOW MUCH CONFIDENCE DO YOU HAVE THAT YOU COULD:

1. Find information in the library or on the Internet about occupations you are interested in.
    1          2          3          4          5

2. Select one major from a list of potential majors that you are considering.
    1          2          3          4          5

3. Make a list of your goals for the next five years.
    1          2          3          4          5

4. Determine the steps to take if you are having academic difficulties in your chosen major.
    1          2          3          4          5

5. Accurately assess your strengths and weaknesses.
    1          2          3          4          5

6. Select one occupation from a list of potential occupations that you are considering.
    1          2          3          4          5

7. Determine the steps you need to take to successfully complete your chosen major.
    1          2          3          4          5

8. Persistently work at your major or career goal even when you get frustrated.
    1          2          3          4          5

9. Determine what your ideal job would be.
    1          2          3          4          5

10. Find out employment trends for an occupation over the next ten years.
    1          2          3          4          5

11. Choose a career that will fit your preferred lifestyle.
    1          2          3          4          5

12. Prepare a good resume.
    1          2          3          4          5

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| No Confidence At all | Very little Confidence | Moderate Confidence | Much Confidence | Complete Confidence |

13. Change majors if you did not like your first choice.

   1        2        3        4        5

14. Decide what you value most in an occupation.

   1        2        3        4        5

15. Find out the average yearly earnings of people working in a specific occupation of your interest.

   1        2        3        4        5

16. Make a career decision and then not worry whether it was right or wrong.

   1        2        3        4        5

17. Change occupations if you are not satisfied with the one you enter.

   1        2        3        4        5

18. Figure out what you want to sacrifice to achieve your career goals.

   1        2        3        4        5

19. Talk with a person already employed in the field you are interested in.

   1        2        3        4        5

20. Choose a major or career that will fit your interests.

   1        2        3        4        5

21. Identify employers, firms, and institutions relevant to your career possibilities.

   1        2        3        4        5

22. Define the type of lifestyle you would like to live.

   1        2        3        4        5

23. Find information about graduate or professional schools.

   1        2        3        4        5

24. Successfully manage the job interview process.

   1        2        3        4        5

25. Identify some reasonable major or career alternatives if you are unable to get your first choice.

   1        2        3        4        5

## APPENDIX F: Academic Motivation Scale

### ACADEMIC MOTIVATION SCALE (HIGH SCHOOL VERSION)

#### Why Do You Go To School?

Using the scale below, indicate to what extent each of the following items presently corresponds to one of the reasons why you go to school.

| Does not correspond at all | Corresponds a little | Corresponds moderately | Corresponds a lot | | Corresponds exactly |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

#### Why Do You Go To School?

| | | |
|---|---|---|
| 1 | Because I need at least a high-school degree in order to find a high-paying job later on. | 1  2  3  4  5  6  7 |
| 2 | Because I experience pleasure and satisfaction while learning new things. | 1  2  3  4  5  6  7 |
| 3 | Because I think that a high-school education will help me better prepare for the career I have chosen. | 1  2  3  4  5  6  7 |
| 4 | Because I really like going to school. | 1  2  3  4  5  6  7 |
| 5 | Honestly, I don't know; I really feel that I am wasting my time in school. | 1  2  3  4  5  6  7 |
| 6 | For the pleasure I experience while surpassing myself in my studies. | 1  2  3  4  5  6  7 |
| 7 | To prove to myself that I am capable of completing my high-school degree. | 1  2  3  4  5  6  7 |
| 8 | In order to obtain a more prestigious job later on. | 1  2  3  4  5  6  7 |
| 9 | For the pleasure I experience when I discover new things never seen before. | 1  2  3  4  5  6  7 |
| 10 | Because eventually it will enable me to enter the job market in a field that I like. | 1  2  3  4  5  6  7 |
| 11 | Because for me, school is fun. | 1  2  3  4  5  6  7 |
| 12 | I once had good reasons for going to school; however, now I wonder whether I should continue. | 1  2  3  4  5  6  7 |
| 13 | For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments. | 1  2  3  4  5  6  7 |
| 14 | Because of the fact that when I succeed in school I feel important. | 1  2  3  4  5  6  7 |
| 15 | Because I want to have "the good life" later on. | 1  2  3  4  5  6  7 |
| 16 | For the pleasure that I experience in broadening my knowledge about subjects which appeal to me. | 1  2  3  4  5  6  7 |

| 17 | Because this will help me make a better choice regarding my career orientation. | 1 2 3 4 5 6 7 |
|----|----|----|
| 18 | For the pleasure that I experience when I am taken by discussions with interesting teachers. | 1 2 3 4 5 6 7 |
| 19 | I can't see why I go to school and frankly, I couldn't care less. | 1 2 3 4 5 6 7 |
| 20 | For the satisfaction I feel when I am in the process of accomplishing difficult academic activities. | 1 2 3 4 5 6 7 |
| 21 | To show myself that I am an intelligent person. | 1 2 3 4 5 6 7 |
| 22 | In order to have a better salary later on. | 1 2 3 4 5 6 7 |
| 23 | Because my studies allow me to continue to learn about many things that interest me. | 1 2 3 4 5 6 7 |
| 24 | Because I believe that my high school education will improve my competence as a worker. | 1 2 3 4 5 6 7 |
| 25 | For the "high" feeling that I experience while reading about various interesting subjects. | 1 2 3 4 5 6 7 |
| 26 | I don't know; I can't understand what I am doing in school. | 1 2 3 4 5 6 7 |
| 27 | Because high school allows me to experience a personal satisfaction in my quest for excellence in my studies. | 1 2 3 4 5 6 7 |
| 28 | Because I want to show myself that I can succeed in my studies. | 1 2 3 4 5 6 7 |

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