THE RELATIONSHIP BETWEEN SELF-EFFICACY, MOTIVATION, AND ACADEMIC PERFORMANCE AMONG STUDENTS FROM VARIOUS GENDER AND GENERATIONAL GROUPS

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DECLARATION

"I, Silindele Mbatha, declare that the dissertation is hereby submitted by me for the Magister Artium (Clinical Psychology) degree at the University of the Free State is my own, independent work and has not previously been submitted by me at another university or faculty. I further cede copyright of the dissertation in favour of the University of the Free State."

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With this I provide permission that this dissertation be submitted for examination.

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PROOF OF LANGUAGE EDITING

Hereby I, Jacob Daniël Theunis De Bruyn STEYL (ID 5702225041082), a professional language practitioner accredited to the South African Translators' Institute (SATI), confirm that I managed the language editing of this dissertation, *The relationship between self-efficacy, motivation, and academic performance among students from various gender and generational groups,* by Silindele Mbatha.

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ABSTRACT

Many students find the first year of university challenging. In South Africa, this situation is complicated further by the transformation in higher education, such as the changing profile of the student population and new access and success policies. Many factors affecting academic performance have been highlighted in research. This particular research study aimed to investigate the relationship between self-efficacy, motivation, and academic performance among students from various gender and generational groups in the South African context.

A non-experimental, quantitative approach with a correlational, criterion group design was used. Non-probability, convenience sampling was used to select 271 first-year students in the Faculty of the Humanities at the University of the Free State. Data were gathered by using a research survey consisting of a biographic questionnaire and two standardised questionnaires, namely the College Self-Efficacy Instrument (CSEI) and the Motivated Strategies for Learning Questionnaire (MSLQ). Academic performance was calculated by obtaining an average of students' marks in core modules during the first year.

Statistically significant differences were found in the academic performance and academic motivation between males and females. There was no significant statistical difference with regard to the different generational groups. Academic motivation and self-efficacy explained only 0.06 % of the variance in academic performance, which is not significant. There were, however, a significant correlation between academic motivation and self-efficacy.

Keywords: Self-efficacy, academic motivation, academic performance, first-generation students and non-first-generation students

OPSOMMING

Baie studente vind die eerste jaar van universiteit uitdagend. In Suid-Afrika word hierdie situasie verder gekompliseer deur die transformasie in hoër onderwys, soos die veranderende profiel van die studentebevolking en nuwe toegang- en suksesbeleide. Baie faktore wat akademiese prestasie beïnvloed, is in navorsing uitgelig. Hierdie besondere navorsingstudie het ten doel gehad om die verwatskap tussen selfdoeltreffendheid, motivering en akademiese prestasie onder studente van verskeie geslag- en generasiegroepe in die Suid-Afrikaanse konteks te ondersoek.

'n Nie-eksperimentele, kwantitatiewe benadering met 'n korrelasionele kriteriumgroep-ontwerp is gebruik. Nie-waarskynlikheid, gerieflikheidsteekproeftrekking is gebruik om 271 eerstejaarstudente in die Fakulteit vir Geesteswetenskappe aan die Universiteit van die Vrystaat te selekteer. 'n Navorsingopname bestaande uit 'n biografiese vraelys en twee gestandaardiseerde vraelyste, naamlik die College Self-Efficacy Instrument (CSEI) en die Motivated Strategies for Learning Questionnaire (MSLQ), is gebruik om data te versamel. Akademiese prestasie is bereken deur 'n gemiddelde van die studente se punte in kernmodules gedurende die eerste jaar te bekom.

Statisties beduidende verskille in die akademiese prestasie en akademiese motivering tussen mans en vrouens is gevind. Daar was geen beduidende statistiese verskille ten opsigte van die verskillende generasiegroepe nie. Akademiese motivering en selfdoeltreffendheid het slegs 0.06% van die variansie in akademiese prestasie verklaar, wat nie beduidend is nie. Daar was egter 'n beduidende korrelasie tussen akademiese motivering en selfdoeltreffendheid.

Sleutelwoorde: Selfdoeltreffendheid, akademiese motivering, eerstegenerasiestudente en nie-eerstegenerasiestudente

CHAPTER 1: HIGHER EDUCATION IN SOUTH AFRICA

Institutions of higher education are the cornerstones of modern-day society. The advancement of a society is dependent on its education system and the amount of resources and efforts that are invested in developing and improving the quality and accessibility of education for all citizens. To improve academic performance in higher education, it is necessary to research factors that affect academic success. The aim of the study was to investigate the relationship between self-efficacy, motivation, and academic performance among students from various gender and generational groups. The following is discussed in the chapter: the context and rationale of the research study, theoretical perspectives underpinning the study, a brief outline of the research design and methodology, delineation of the chapters, and a summary of the chapter.

1.1   The educational context in South Africa

The South African political and historical context has largely shaped and affected the education system. The historical background of the South African education system is addressed to orientate one with regard to how previous education policies have affected the education system. Measures that have been implemented to transform and mitigate the effects on the previous education policies are highlighted, as well as the challenges in higher education currently confronting the government. Additionally, the current status regarding enrolment rates and diversity profiles in higher education is addressed.

1.1.1   History and background of the South African education system

Under the apartheid regime, the education system was used as a vehicle to maintain segregation and promote inequality. Separate education systems for black (including coloured, Indian, and black people) and white people were developed and implemented. Under the Bantu Education Act of 1953 (Woodrooffe, 2011), Bantu education was introduced and implemented to educate and prepare (train) black people for inferior career paths and roles in society. The inferior quality of education that was provided to black people was intended to position them to do manual labour (Mabokela, 2000; Sehoole, 2005).

In terms of access and admission to institutions of higher education, black people were allowed to pursue higher education. Segregation was evident in higher education in the separation or division of universities into white institutions, non-white institutions and open universities. Open universities were open to all individuals despite the colour of their skin. However, in order to gain admission to open universities, individuals had to obtain permission from the Minister of Education (Woodrooffe, 2011).

1.1.2 Transformation in higher education

In 1994, under the democratically elected government, the apartheid system was abolished. Policies were implemented to mitigate the effect and legacy left by the education policies of the apartheid government (Woodrooffe, 2011). As part of transformation, the government undertook the task to revise and transform the education system into a single, unified, and efficient education system (Kraak, 2004).

The Education White Paper issued in July 1997 was aimed at transforming higher education in terms of "size, structure, governance, funding, and other aspects of post-apartheid higher education in South Africa" (Department of Education, 1997; Fiske & Ladd, 2004). A follow-up policy was issued in June 2000 with the main focus on efficiency instead of equality, as observed in White Paper 3 (Cloete et al., 2006; Fiske & Ladd, 2004). In 2001, another policy plan in which the Department of Education made the proposition that institutions of higher learning that had fewer than 4 000 enrolled full-time students be closed down (Balintulo, 2004) was issued. The aim of the mergers was to form more efficient institutions of higher learning that provided quality education (Ministry of Education, 2001).

In addition, institutions that were exclusively Afrikaans were required to conduct lectures in English to allow non-Afrikaans-speaking students to attend and be trained at those institutions (Cloete et al., 2006). Further transformation in higher education included provision of funding opportunities in order to improve accessibility of higher education. The primary aim of the National Student Financial Aid Scheme (NSFAS), which was established in 1996, was funding students who could not afford to attend university to obtain a qualification and earn a living to improve their lives (Wangenge-Ouma, 2012).

1.1.3   Challenges in the current higher education system

Despite the continuous efforts by the government to redress the legacy of apartheid in the education sector, some challenges still need to be addressed. The task of transforming the education system has been a challenge, and constant revisions are made to improve the education system to be efficient and of good quality. The prominent challenges that surfaced in higher education – especially at non-white institutions – included poor infrastructure, lack of teaching facilities and resources, inadequate financing, underqualified and limited teaching staff, and low student achievement (Mabokela, 2000).

Individuals who come from disadvantaged backgrounds have financial difficulties enrolling and paying for their tuition fees at universities. In addition, students who come from disadvantaged schools are unable to perform and adapt well academically at university due to the poor quality of education. With the growing number of enrolments at institutions of higher learning, facilities to accommodate the growing number of students are still inadequate (Department of Higher Education and Training, 2013). Regardless of the growing number of student enrolment, the quality of education at all levels in education still need to be improved. The quality of education at high school should be tailored in such a way that it prepares learners for the academic demands of institutions of higher learning. If the former is achieved successfully, students at institutions of higher learning would be able to adapt well academically.

1.1.4   The current status regarding enrolment rates and diversity profiles in higher education

Transformation has also been evident in the enrolment rates at institutions of higher education (Department of Higher Education and Training, 2012-2013). The number of students enrolled at higher education training institutions that include, higher education institutions (HEIs) further education and training colleges (FET) and adult education and training centres (AET) was 2 139 204 in 2012. Enrolment in HEIs in the private and public sectors grew from 868 178 in 2008 to 1 050 851 in 2012 (Department of Higher Education and Training, 2012-2013). In terms of gender, females at public HEIs significantly outnumbered their male counterparts in 2012, at 58.2% and 41.8% respectively. At private

HEIs, female students also outnumbered male students with 56% and 44% respectively (Department of Higher Education and Training, 2012-2013).

In terms of race profiles, increased diversity in student population has been evident over the years. Black students enrolled at institutions of higher learning increased from 27% in 1986 to 62% by 2005, showing a significant growth over the years. The coloured and Indian enrolment rate has remained stagnant at 13% in 1986 and 13% again in 2005. Meanwhile, the white student population at institutions of higher learning was 60% in 1986 and decreased over the years to 25% (Bunting & Cloete, 2008).

The nationwide success rate for all students enrolled at institutions of higher learning was 80.3% in 2012. According to race, white students outperformed students of other race groups with 87.6 %, followed by Indian students with 84 %, coloured students with 80.8 % and lastly black students with 77.9 % in 2012 (Department of Higher Education and Training, 2012-2013). Although the enrolment ratio of black students has improved, the success rate has not improved significantly. Black students still lag behind in terms of success rates in comparison with other race groups.

1.2   Rationale and aim of the study

Obtaining a higher education qualification means one is equipped with the necessary skills to compete in the forever changing and competitive working world. The specialised skills that individuals hold enable them to secure employment and generate a steady income (Altbach, Reisberg, & Rumbley, 2009). The above-mentioned may not materialise for some students due to poor academic performance and failure to obtain a higher education qualification. The important task is to conduct research studies that investigate the factors that contribute to academic performance in order to increase success and graduation rates.

This particular study aimed to investigate the relationship between self-efficacy, motivation, and academic performance among students from various gender and generational groups in the South African context. To reach this overarching research aim, the following research questions were investigated:

1.   Are there significant differences in self-efficacy, motivation and academic performance among gender and generational groups?

2.   Can a significant amount of variance in academic performance be explained by self-efficacy and motivation?

1.3   Theoretical perspectives underpinning the study

A key aspect in education is a student's academic performance. Academic performance is important to institutions of higher education, and efforts are made to ensure student success. Improvement in academic performance implies lower dropout rates and increased graduation rates (Alexander, 2000). The university funding is also associated with and dependent on academic performance (Brinkworth, McCann, Matthews, & Nordstrom, 2009). Accreditation agencies also expect of universities to increase their academic performance to be able to continue presenting the qualifications offered at their institutions. In addition, universities need to maintain high standards of academic performance as they compete with domestic and international universities to retain current students, attract prospective students and ensure that potential employers hire their graduates (Nonis & Wright, 2003).

It is also known that academic performance affects persistence and attrition rates at university. Many factors affect academic performance, and these factors include (but are not limited to) academic motivation (Prospero & Vohra-Gupta, 2007), self-efficacy (Choi, 2005; Pajares & Schunk, 2001), and financial and socio-economic status. The available body of research highlights the value of internal resources (self-efficacy and motivation) as key factors to the success of university students (Prospero & Vohra-Gupta, 2007; Choi, 2005; Pajares & Schunk, 2001).

In this study, the constructs *self-efficacy* and *motivation* were conceptualised using various theoretical perspectives. For self-efficacy, Bandura's (1986) social cognitive theory was used. Deci and Ryan's (2000) self-determination theory and Wigfield and Eccles's (1992) expectancy value theory were utilised to conceptualise motivation.

Self-efficacy can be defined as individuals' beliefs in their own ability to achieve or succeed in a particular goal or task (Bandura, 1986). Self-efficacy can be explained using the social

cognitive theory (Bandura, 1986; Watson, McSorley, Foxcroft, & Watson, 2004). According to the social cognitive theory, when people are confident about their ability to achieve a specific goal, every effort is made to ensure realisation of that particular goal. According to Bandura (1986), individuals engage in meaningful or symbolic thinking processes that enable them to predict possible outcomes of their behaviour. As said by Bandura (1986), observing an individual successfully completing a task and getting rewarded encourages one to also copy the same behaviour (Watson et al., 2004). The degree of self-efficacy determines people's willingness to approach a task; thus, the extent of self-efficacy influences persistence and level of performance (DeWitz & Walsh, 2002).

Motivation can be defined as a process in an individual that has the potential to give the person the drive to initiate and follow through the desired choice and action (Mackay, 2010). The self-determination theory (Deci & Ryan, 2000) and the expectancy value theory (Wigfield & Eccles, 1992) are used frequently in explaining the dynamics of motivation and how motivation guides choice, persistence and performance during completion of a task(s) (Vansteenkiste, Lens, & Deci, 2006). The main assumption of the self-determination theory is that motivation is the underlying factor in predicting learning behaviour (Vansteenkiste et al., 2006). The expectancy value theory further explains that an individual's behaviour is influenced mainly by the beliefs he or she holds towards how well he or she will be able to perform a task. Previous performance levels (poor or successful attempts) inform the belief system of ability and, inevitably, the choice to participate in a particular task or to avoid the task. When people see value in performing a certain task, they will perform the task to the best of their abilities (Wigfield & Eccles, 1992).

The higher education student has become more diverse, specifically with regard to students who are the first ones in their families to attend university (Vuong, Brown-Welty, & Tracz, 2010). Billson and Terry (1982), as well as Vuong et al. (2010), describe first-generation students as university students who do not have at least one parent who has obtained a bachelor's or higher degree. First-generation students encounter distinct barriers at higher education institutions, such as gaining access to higher education, remaining enrolled and attaining a degree in comparison with non-first-generation students (Horn & Nunez, 2000). In addition to research studies being conducted on first-generation students, gender differences in terms of academic performance have also been at the forefront. Contradictory studies in

support of either gender warrant further research studies so that a clear distinction can be made about the moderating effect of gender.

1.4   Overview of the research design and methodology

In this study, a non-experimental quantitative approach was followed. The research design included correlational and criterion groups. The quantitative approach helped generate objective statistical data for analysis. The nature of the design enabled the researcher to investigate relationships and make generalisable comparisons between groups of students (Durrheim, 2010).

First year students in the Faculty of the Humanities from the University of the Free State participated in the study. A total of 271 participants were recruited through non-probability convenience sampling (Durrheim, 2010). All participants in the study were required to complete a biographic form with information regarding their gender, age, ethnicity, student number, and generational status (parent's education). Data were collected by means of two standardised questionnaires, namely the College Self-Efficacy Instrument (CSEI) (Solberg, O'Brien, Villareal, Kennel, & Davis, 1993) and the Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich, Smith, Garcia, & McKeachie, 1991). In addition, the students' academic records were accessed to obtain their academic marks. Academic performance was determined by obtaining an average of the students' marks in core modules. Since all students were from the Faculty of the Humanities, only major subjects for which all students were enrolled were considered.

In terms of data analysis, the reliability of the measures was determined by means of the Cronbach alpha coefficient (Tavakol & Dennick, 2011). Multivariate analyses of variance (Wilson & MacLean, 2011) were used to determine the differences in self-efficacy, motivation, and academic performance for the different gender and generational groups. Furthermore, regression analysis was used to determine the amount of variance in academic performance that can be explained by self-efficacy and motivation.

1.5   Delineation of chapters

Chapter 1. A brief description of the entire study is provided by means of a discussion of the history and background of the South African educational context. Additionally, the significance for conducting research on the relationship between self-efficacy, motivation and academic performance among students of various gender and generational groups in the South African context is highlighted. Furthermore, the theoretical perspectives underpinning the study, as well as an outline of the research design and methodology, are highlighted in this chapter.

Chapter 2. Existing literature regarding academic performance during the first year at institutions of higher education is discussed. Specific attention is devoted to the following subtopics: definition and conceptualisation of academic performance, factors that influence academic performance, and academic performance in relation to gender and generational status. The overall aim of Chapter 2 is to orientate the reader towards having a better understanding of the theoretical perspectives underpinning academic performance.

Chapter 3. An in-depth literature review of two factors that affect academic performance, namely self-efficacy and motivation, is provided. A conceptualisation of self-efficacy is presented. Additionally, the theoretical perspectives underpinning self-efficacy are discussed, as well as self-efficacy in relation to gender and generational status. Motivation is also defined and conceptualised. Furthermore, theoretical perspectives regarding motivation are discussed, along with academic motivation in relation to gender and generational status.

Chapter 4. A thorough discussion on the methodology of the current study is given. Specific reference is made to the aim, research design, and approach of the study. The sampling procedures, a profile of the participants, data collection, data analyses, and ethical considerations are also discussed.

Chapter 5. Results are presented and discussed in Chapter 5. The statistical findings and analyses of the results are presented. Furthermore, the research findings are explained and discussed in depth in relation to the research questions.

Chapter 6. The conclusion, limitation of the study, and the recommendations for future research are highlighted.

1.6 Chapter summary

In this chapter, the history and background of the educational context was provided, highlighting the legacy of the apartheid era, as well as the inherent challenges encountered in an effort to mitigate the effects of separate education systems. In addition, the measures taken to transform the education system into a unified system were discussed together with the current status regarding diversity in higher education. The rationale for the study, the theoretical perspectives underpinning the study, an outline of the research methodology, and a brief description of chapters in the research were also discussed.

CHAPTER 2: ACADEMIC PERFORMANCE

In this chapter, the construct *academic performance* is defined and conceptualised. Furthermore, the factors that contribute to academic performance are discussed in depth. Additionally, academic performance in relation to gender and generational status is highlighted.

2.1   Definitions and conceptualisation of academic performance

Academic performance can be operationalised in various ways (Adelman, 2006). Stemler (2012) defines academic performance as a student's ability to apply the acquired academic knowledge successfully and argues that being in possession of academic knowledge does not guarantee successful application and use of the knowledge. Therefore, academic performance constitutes acquiring knowledge and using specific skills to implement the acquired knowledge (Stemler, 2012). According to Ayan and Garcia (2008), a traditional approach followed in most educational settings is to define academic performance is terms of grades. The results one produces in relation to a specific goal that was set in a particular context (i.e., school, college, and university) define academic performance (Steinmayr, Meibner, Weidinger, & Wirthwein, 2014).

At university level, academic performance entails the results a student obtains in the respective modules for which he or she is enrolled. Results can be simplified as the marks that one can obtain after completing a specific academic task. Amongst other things, these tasks or goals may include critical thinking or understanding and applying the acquired knowledge practically. Steinmayr et al. (2014) provide different criteria that are used to measure academic performance, namely procedural knowledge, declarative knowledge, curricular-based indicators (grades and performance in tests and examinations) and cumulative indicators (educational degrees, diplomas, and certificates).

Multiple techniques can be used to measure academic performance. However, there is no consensus regarding the best technique to utilise when measuring academic performance.

One method that is used to indicate academic performance is the use of academic credits. This method is used mostly at institutions of higher learning. A student has to attain a number of academic credits to advance in his or her programme (Nurmi, Aunola, Salmela-Aro, & Lindroos, 2003). Each module is assigned a certain number of credits, and passing the module means the student obtains the academic credits allocated to the module. Marks are not the main aspect considered; however, passing the module and accumulating the academic credit value of the module is crucial. The academic credits accumulated are used to promote the student to advance in the programme (Nurmi et al., 2003).

Other approaches used to measure academic performance include formative assessment, summative assessments, and an average of all modules in a particular semester or year. A formative assessment entails the use of tests that are written throughout the semester to monitor and track the academic progress of students. Kuncel, Hezlett and Ones (2001) advised that formative assessments like tests should be used because tests are a measure of academic progress that is more objective than summative assessments are. A summative assessment is the use of a final mark per module to measure academic performance. In spite of the above-mentioned approaches, some institutions of higher learning argue that considering an average of all modules in a particular semester or year is more valid. The reasoning is that an average of all modules can be used as a predictor of university persistence and enrolment in certain programmes (Conard, 2006). To overcome the shortfall of either using a formative assessment or an average of all modules, Burton and Ramist (2001) advise that the use of both measures of academic performance is a better alternative.

For this particular study, academic performance is defined as the success acquired by meeting the academic criteria set for the specific modules. The criteria can include critical thinking and understanding and applying the acquired knowledge practically. In this study, academic performance was measured by calculating an average of the students' first-year module marks in all their core modules.

2.2   Factors that affect academic performance

Identifying factors that affect academic performance is of paramount importance, as academic success is fundamental in education settings. Factors that affect academic performance have always been at the forefront in the research domain dedicated to higher

education. The key factors that affect academic performance are not limited to intellectual factors only. Non-intellectual traits such as individual characteristics, self-discipline (Cassidy, 2012), and creativity (Naderi, Abdullah, Aizan, Sharir, & Kumar, 2009) have been identified as affecting academic performance. Additional factors include socio-economic status, generational status, quality of school education, and psychosocial factors (i.e., motivation, self-efficacy, goal orientation etc.) (Cassidy, 2012; Klomegah, 2007). In the next section, the various factors that affect academic performance are discussed in depth, by referring to cognition-related factors, demographic factors, and individual psychosocial characteristics.

2.2.1 *Cognition-related factors*

Cognition refers to the intellectual process in which knowledge is acquired and subsequently utilised to solve problems (Sigelman & Rider, 2006). Cognitive aspects that assist in cognitive processes include perception, concentration, memory and reasoning (Louw, Van Ede, & Louw, 1998). The above-mentioned attributes of cognition are all crucial to academic performance. Although a variety of cognition-related factors have been researched in relation to academic performance, this section focuses on the role of intelligence, high school achievement, and language proficiency.

Intelligence has been identified as a strong predictor of academic performance (Cassidy, 2012). Piaget's definition of intelligence states that intelligence is a basic life function that helps an organism adapt to its environment (Sigelman & Rider, 2006). Generally, in an education environment, intelligence can be described as the skill to learn independently (Fraser & Killen, 2005) and to apply acquired knowledge effectively in order to produce the desired effects (academic success) (Steinmayr et al., 2014). A study conducted by Dickerson-Mayes, Calhoun, Bixler, & Zimmerman (2008) confirmed that intelligence quotient (IQ) was the most crucial factor implicated in academic performance. Consequently, a higher IQ was a predictor of good academic performance. Duckworth and Seligman (2005) also confirmed the above. However, they found that students fail to live up to their intellectual potential due to a lack of self-discipline. Therefore, one may conclude that intelligence is the main factor that affects academic performance, but other factors may affect whether students live up to their intellectual potential.

High school achievement has been identified as a strong predictor of academic performance in higher education. Knowledge and experience acquired at high school can be regarded as the foundation on which subsequent knowledge and success is built (Martin, Wilson, Liem, & Ginns, 2013). According to Smith and Naylor (2001), school performance affects how a student performs at university. Academic performance is better for a student who has been performing well since high school (Smith & Naylor, 2001). Dobson and Skuja (2005) also support the former argument, stating that high school achievement is a valid predictor of academic performance because students are selected into university programmes by considering their high school achievement record with the hope that they will be able to produce the same academic results. Thus, there is an assumption that students who achieve good grades at high school, are also better equipped to cope and succeed with academic demands at university.

Another influential factor in academic performance is language proficiency (Van Eeden, De Beer, & Coetzee, 2001). The medium of instruction for teaching, learning, and assessment is an essential aspect of academic success (Coetzee-Van Rooy, 2010). The importance of language is highlighted in the 2010 report of the Council on Higher Education (CHE). Language is among the six identified elements of practice that should be given special attention to improve the academic performance of students at South African universities (CHE, 2010).

Fakeye (2014) studied English proficiency as a predictor of academic performance and showed that language proficiency had a significant positive correlation with overall academic achievement. Thus, it was recommended that efforts should be made to assist learners in becoming more proficient in English for better academic performance. Another study by Stephen, Welman, and Jordaan (2004) conducted at South African higher education institutions confirmed the effect of English proficiency on academic performance. Possible explanations for poor academic performance for students who were not proficient in English were that English was a second language and the students had literacy skills problems. Thus, students had to decode English into their mother tongue and later reinterpret and express their thoughts in English, making room for misinterpretation. Additionally, students were unable to express their thoughts in written form. Literacy skills promote better academic performance and they are all connected to language proficiency (Stephen et al., 2004).

2.2.2   Demographic factors

Demographic factors refer to the data of a certain population group. Demographic factors may include age, gender, income level, occupation, and race. However, the demographic factors that are of central attention in this section include socioeconomic status (SES) and parents' education level.

With certainty, one can make the assumption that an individual's background can affect his or her choices in life. SES is linked positively with academic performance. Students with a lower SES have greater chances of dropping out of university (Vignoles & Powdthavee, 2009) because they are unable to afford the important resources (textbooks, information technology resources) required in academic settings (Martin et al., 2013). Students with a high SES view their learning and education as crucial, they rate their academic ability as high, have high academic averages and high academic aspirations, and experienced education as positive (Chow, 2003). Conversely, students with a lower SES have poor academic self-concepts and confidence and minimal interest in education (James, 2002). The lack of interest in pursuing academic dreams is due to their pressing financial status. Rather, their focus is on earning an income after completing high school (James, 2002) to improve their SES.

Having parents who have university qualifications has some benefits when it comes to academic success. Students who have university graduate parents have the opportunity to be guided and equipped with skills to bring about a smooth transition to university and better adjustment (Ramos-Sánchez & Nichols, 2007). Parents who have graduated from university tend to have higher academic ambitions for their children and provide continuous support to ensure their children do well at university (Ramos-Sánchez & Nichols, 2007). This will be discussed in greater depth in sections to follow.

2.2.3   Individual psychosocial characteristics

Individual psychosocial characteristics refer to psychological and social aspects that may include drives, principles, morals, and behaviour that individuals display (Sigelman & Rider, 2006). Conard (2006) argues the use of individual psychosocial characteristics as factors that

contribute to academic performance as a means of complimenting the traditional use of cognitive measures that affect academic performance. Individual psychosocial characteristics that will be discussed in this section include self-concept, learning styles and attitude, being conscientious, and emotional intelligence.

It has been argued that self-concept affects academic performance positively (Bong & Skaalvik, 2003). Rosenberg (1979) describes self-concept as "the totality of the individual's thoughts and feelings having reference to himself as an object" (p.7). Self-concept is individuals' views of themselves and their capabilities, which is influenced by their thoughts and feelings. Academic self-concept is individuals' views of their academic ability and potential for achievement. Therefore a deduction can be made that a good academic self-concept would imply better academic performance. A positive academic self-concept would suggest that a student believes in his or her abilities and is motivated to pursue academic challenges and tasks because he or she believes he or she will succeed (Bong & Skaalvik, 2003).

It has been found that learning strategy and style and study skills affect academic performance. Study skills, habits, and attitudes are tools required in education settings to succeed. The study skills, habits, and attitudes that contribute to academic success, include the ability to manage time and resources, having a study routine, and having a positive attitude towards academic work (Crede & Kuncel, 2008). Spending more time on academic related activities also increases success rates (Liu & Cavanaugh, 2012). Poor study skills or habits tend to lead to difficulties adjusting to academic demands at university and, inevitably, students with poor study habits withdraw from university as they are unable to meet the demands of their programmes (Crede & Kuncel, 2008).

Researchers (Conard, 2006; O'Connor & Paunonen, 2007) found that conscientiousness was a personality trait frequently associated with academic performance. Conscientiousness manifests as behaviour, for example, class attendance and active participation in class, which correlate well with academic performance while controlling for academic ability. In addition, openness to experience correlated positively with academic achievement (O'Connor & Paunonen, 2007).

Other individual psychosocial characteristics that correlated positively with academic performance and success include emotional intelligence, which is the ability to deal with academic and life stress by employing effective and adaptive coping skills (Malefo, 2000). Additionally, a high level of discipline (Legotlo, Maaga, & Sebego, 2002), self-efficacy (Choi, 2005; Pajares & Schunk, 2001), and motivation (Eccles & Wigfield, 2002) have been correlated positively with academic performance. The scope of the study primarily focused on self-efficacy and academic motivation due to the high correlation with academic performance and success. These constructs (self-efficacy and motivation) are discussed in depth in Chapter 3.

From the above-mentioned, it is evident that factors that affect academic performance include intellectual and non-intellectual factors. Intellectual and non-intellectual factors interact to provide a holistic view of academic performance.

2.3   Academic performance and gender

Another factor that is associated with academic performance and academic success is gender. Previous research findings regarding the effects of gender on academic performance have been contradictory (Ayan & Garcia, 2008). In a study conducted by Harrison et al. (2009) to assess university athletes' academic performance, males achieved better academic results on difficult test items in comparison with their female counterparts. Pajares and Schunk (2001) also report that males tend to do better academically in comparison with females, especially in mathematics, science, and technology.

Richardson and Woodley (2003) provide evidence in support of women doing academically better than men do. They highlight that women are more likely to obtain better results than men. Additional studies support the notion that females, in comparison with males, perform better academically (Conley, 2001; Roberts, Clifton & Etcheverry, 2001; Sheard, 2009).

In contrast with the above-mentioned findings, Naderi et al. (2009) and Naderi, Abdullah, Hamid, Aizan, and Sharir (2008) argue that gender has no moderating or influential effect on marks. Clifton, Perry, Stubbs, and Roberts (2004) also found no influence of gender on academic performance.

The difference in academic performance by males and females can be attributed to learning strategies. Males and females utilise different learning strategies that result in different levels of academic performance (Lundeberg & Moch, 1995; Martínez, 1997). In a study conducted by Clifton et al. (2004), males had high self-esteem and females had better coping strategies that positively affected academic performance. According to Gordon-Rouse and Austin (2002), males perform poorly in academics compared to females possibly because males are more recognised and judged for achievement in areas other than education, for example, sports.

According to Sheard (2009), females performed better than males because of commitment, which positively correlated with academic achievement. Further evidence of reasons explaining why females performed better in academics is provided by Conley (2001) and Roberts et al. (2001) who attribute academic success of females to positive psychosocial characteristics (i.e., self-esteem, perceived academic control, and coping strategies). More research is needed to understand the differences in academic performance in terms of gender.

2.4   Academic performance and generational status

Many individuals, including those who have been less privileged not to attend institutions of higher learning, are pursuing higher education. Billson and Terry (1982), as well as Vuong et al. (2010), describe first-generation students as students who are the first in their families to attend university; neither of their parents has obtained a university qualification. Students whose parents have a university qualification are referred to as non-first generation students (Prospero & Vohra-Gupta, 2007).

First-generation students encounter distinct barriers at higher education institutions, such as gaining access to higher education, staying enrolled, and obtaining a degree (Horn & Nunez, 2000). First-generation students not only encounter problems while enrolled at institutions of higher education, but they also experience difficulties prior to being enrolled. Once they are enrolled at a university, they experience problems adjusting to the academic demands of university, which subsequently translate into poor academic performance (Ramos-Sánchez & Nichols, 2007). Ishitani (2003) found that first-generation students were likely to drop out of university in comparison with non-first-generation students.

First-generation students identified themselves as less prepared (academically) for the transition to institutions of higher learning (Warburton, Bugarin, & Nunez, 2001), and more concerned about their financial problems in comparison with non-first-generation students (Bui, 2002; Fallon, 1997). In addition, Olenchak and Hebert (2002) found that the following reasons may account for the higher attrition rates in first-generation students: problems adjusting to university, feelings of isolation, and unclear purpose for being at university.

2.5   Chapter summary

In this chapter, academic performance was addressed with specific attention to the conceptualisation of academic performance, as well as the predictors of academic performance. Finally, academic performance was discussed in relation to gender and generational status.

CHAPTER 3: SELF-EFFICACY AND ACADEMIC MOTIVATION

A variety of constructs have been associated with academic performance. In this chapter, self-efficacy and academic motivation are considered. The constructs are defined and conceptualised. Additionally, theoretical perspectives regarding self-efficacy and academic motivation are presented. Moreover, self-efficacy and academic motivation are discussed in relation to gender and generational groups.

3.1   Self-efficacy

In this section, the definition and components of self-efficacy are presented. The social cognitive theory (Bandura, 1986) is used to explain self-efficacy in depth. Self-efficacy is also discussed in relation to gender and generational groups.

3.1.1   Definitions and components of self-efficacy

Self-efficacy can be defined broadly as individuals' confidence in their capability to achieve particular goals (Hsieh, Sullivan, & Guerra, 2007). Bandura (1997) refers to self-efficacy as individuals' assessment and conviction regarding their ability to coordinate and perform a task successfully. Zajacova, Lynch and Espenshade (2005) highlight that the judgement and convictions that individuals hold towards their capability to perform tasks constitute self-efficacy.

Barry and Finney (2009) highlight three categories of self-efficacy, namely social, roommate, and academic self-efficacy. Social efficacy refers to an individual's personal relations and social adjustment (Wright, Jenkins-Guarnieri, & Murdock, 2012). Social efficacy at university refers to a student's competence and capability to develop and maintain social interactions with fellow students, as well as with the university staff members (Zajacova et al., 2005). Being able to have interpersonal relations with fellow students and the university staff members shows good social adjustment (Barry & Finney, 2009). Roommate self-efficacy refers to interactions with roommates or people with whom one resides (Zajacova et al., 2005). Maintaining good relations with people with whom one lives during the course of

one's studies indicates effective interpersonal skills and enhances social adjustment (Barry & Finney, 2009).

Academic self-efficacy is described as "personal judgements of one's capabilities to organise and execute courses of action to attain designated types of educational performances" (Zimmerman, 1995, p. 203). Chemers, Hu and Garcia (2001), Gore (2006), Solberg et al. (1993), and Zajacova et al. (2005) also define academic self-efficacy as students' trust and confidence in their capabilities and skills to plan, coordinate, and perform academic related activities successfully at the required level.

Academic success, which is the aim and drive for students who have high academic self-efficacy, may be operationalised as passing examinations, assignments and other academic activities. The perceived ability to achieve academic goals encourages one to pursue those specific academic goals because of the belief that success is inevitable. Students who measure high in academic self-efficacy perceive academic difficulties as worthy challenges that are exciting and worth pursuing because of the satisfaction they bring once they are accomplished (Pajares & Schunk, 2001).

Self-efficacy at university is vital for not only academic purposes and social adjustment, but also plays an integral role in the wellness and personal adjustment of students (DeWitz & Walsh, 2002; Gore, 2006; Solberg & Villareal, 1998).

3.1.2   *Theoretical grounding for self-efficacy*

Bandura (1986) developed the social cognitive theory, which can provide understanding of self-efficacy and the dynamics related to it. Bandura (1986) defines self-efficacy as peoples' certainty in their capability to perform an action or duty. Self-efficacy is linked to making decisions, formulating a plan of action, and maintaining the effort (Bandura, 1986). Individuals' self-efficacy enables them to motivate the decisions they make and inevitably their courses of action (Pajares & Schunk, 2001). People are more likely to engage and involve themselves in activities and tasks in which they feel confident and avoid activities where they doubt their abilities (Vuong et al., 2010). Motivation to act and perform a task is limited when a person has the impression that he or she cannot produce the desired effect or response (success) (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996).

Bandura et al. (1996) propose that self-efficacy beliefs influence ambition, drive, persistence in the face of challenges, and susceptibility to pressure and stress. Self-efficacy beliefs can foster strong academic aspirations leading to great academic achievement. Academic self-efficacy can be a protective factor against the stress and depression related to the academic workload and demands. Therefore, self-efficacy can promote psychological well-being (Bandura et al., 1996). The above-mentioned psychological processes, which are influenced by self-efficacy beliefs, also encourage intellectual development (Bandura et al., 1996). Academic aspirations and the quest for knowledge stimulate and encourage intellectual development.

There are four identified sources of self-efficacy. These sources have an influence on how self-efficacy is constructed. These sources are 1) support and persuasion from parents; 2) cognitive processes; 3) identifying with a model through observational learning; and 4) past performances or experiences (Bandura, 1986). These four sources are the foundations of self-efficacy.

According to the social cognitive theory (Bandura, 1986, 1994), support and persuasion of parents have the potential to influence children (students). Bandura et al. (1996) found that parents who had a high socio-economic status were more inclined to have high academic and career goals for their children. These aspirations that parents hold for their children have a great influence on their children's academic self-efficacy beliefs. Because of parental involvement, these children (students) believe that they can master the academic tasks and they engage in self-regulating behaviour when it comes to learning and academics. Parental involvement, encouragement, and confidence in their children's academic abilities increase the self-efficacy beliefs that children (students) have (Bandura et al., 1996).

Cognitive processes are also highlighted and said to be influential in human behaviour. According to Bandura (1986), individuals engage in meaningful or symbolic thinking processes that enable them to predict possible outcomes of their behaviour and how much effort will be required to perform a task successfully. Individuals with high self-efficacy approach tasks with a positive attitude and the aim of performing well in a task. Individuals with low self-efficacy view a task as difficult, which activates stress and depression that restrict their ability to solve a problem constructively and successfully (Bandura, 1986).

In addition to cognitive processes, Bandura (1986) highlights the importance of identifying with a model through observational learning. For Bandura (1986), to observe is to learn behaviour and the possible outcomes of such behaviour. Observing an individual successfully completing a task and getting rewarded encourages one to also try to emulate the same behaviour (Watson et al., 2004). The individual who is the observer gains the confidence to perform the task, as he or she has seen the skill and effort that has to be invested to gain success.

Finally, the degree of self-efficacy is also affected by past performances or experiences (DeWitz & Walsh, 2002). For example, past failure in a specific subject area weakens one's academic self-efficacy, which restricts the effort, confidence, and belief of performing well in the subject. The opposite is also true. Past successes strengthen one's self-efficacy, making it easy for one to engage in meaningful thinking processes to succeed in the task. In sum, high self-efficacy produces positive effects that enable one to engage in adaptive behaviour and to strive for successful outcomes (Phan, 2011).

3.1.3   Self-efficacy and gender

The degree of self-efficacy can differ between gender groups. In a study completed by Broos (2005), males had high self-efficacy, performed better and had less anxiety in comparison with females when it came to information and communication technology. Pajares and Schunk (2001) highlight that, in comparison with females, males tend to have high self-efficacy and do better in academic areas that include mathematics, technology, and science.

Contrary to the above-mentioned, girls in high school report better self-efficacy in comparison with boys when it to comes to academic writing (Pajares, 2003). Saunders, Davis, Williams, and Williams (2004) also confirm that female students measure high on academic self-efficacy.

Hampton and Mason (2002, p. 101) investigated "the influence of learning disability, gender, and self-efficacy on academic achievement in high school students" and realised that gender had little to no influence on the self-efficacy beliefs that learners held.

The differences in self-efficacy between different genders are influenced mainly by gender stereotyping in fields of study. For example, Hampton and Mason (2002) explain that differences in self-efficacy tend to be more prominent in gender-stereotypical tasks and activities. Academic activities that can be considered gender neutral show less reported gender differences in self-efficacy. Pajares (2003) cautions against gender stereotyping when it comes to specific subjects. He argues that in subjects that are deemed more masculine, boys would be more likely to report high self-efficacy. The same is true of feminine-considered subjects (Pajares, 2003).

Nonetheless, females are usually socialised and orientated towards completing and graduating from high school, which requires a high level of self-efficacy and academic achievement. Females have more academic skills (i.e. commitment and effort), and they tend to utilise self-regulated learning strategies more often than males do (Saunders et al., 2004). Edens (2008) argues that, although females outperform males in academics, females underestimate their competence, reporting low self-efficacy while males overestimate their academic self-efficacy. In gender-neutral academic programmes, gender has no moderating effect. Thus, it is clear that more research on self-efficacy and the moderating effect of gender in gender-neutral academic tasks and activities is necessary.

3.1.4   Self-efficacy and generational status

First-generation students tend to have low academic aspirations, which are an indication of poor academic self-efficacy (Vuong et al., 2010). The implication of having poor academic self-efficacy is poor academic performance and failure. Vuong et al., (2010) report that poor beliefs regarding academic self-efficacy often lead to stress and depression. This impedes a student's will to take initiative and engage creatively with the education material.

There are multiple explanations for poor beliefs about self-efficacy that first-generation students hold. First-generation students reported that they lacked the necessary information and knowledge about higher education, were less prepared academically, encountered academic difficulties (i.e., difficulty adapting to the university culture of teaching and learning, inability to manage the academic workload), and social problems (i.e., financial problems, less social support), all of which made it difficult to adjust at institutions of higher learning (Warburton et al., 2001). The above-mentioned challenges made the experiences of

first-generation students at institutions of higher learning different from those of their peers who did not have to overcome such challenges. These challenges usually translate to poor self-efficacy and poor academic performance.

First-generation students who have higher levels of self-efficacy tend to be more successful in their academics. A high level of self-efficacy sustains motivation, which leads to an increased need to learn, pursue academic challenging goals, and cultivate intellectual skills (self-regulatory strategies, deeper cognitive processing of leaning material) (Hsieh et al., 2007). Ramos-Sánchez and Nichols (2007) propose that the difference between successful and unsuccessful first-generation students is the internal factors (self-efficacy) and perceived social support. Successful first-generation students cope better because of high self-efficacy and do not see themselves as deprived of social support (Phinney & Haas, 2003). Individuals who overcome challenges regarding generational status do so because they believe in themselves, place high expectations on themselves, invest enough effort required to succeed, and are able to persist in the face of challenges (Bandura, 1997).

In spite of the above-mentioned, Ramos-Sánchez and Nichols (2007) highlight that, although some first-generation students succeed in institutions of higher learning and measure high in self-efficacy, their levels of self-efficacy and academic performance are relatively lower in comparison with non-first-generation students.

3.2   Academic motivation

In this section, academic motivation is defined and conceptualised. The self-determination theory (Deci, Vallerand, Pelletier, & Ryan, 1991; Eccles & Wigfield, 2002) and the expectancy value theory (Wigfield & Eccles, 1992) are utilised to provide a better understanding of how academic motivation manifests. Furthermore, academic motivation is discussed in relation to gender and generational groups.

3.2.1   *Definitions and components of academic motivation*

A variety of definitions regarding general motivation exists. Mackay (2010) defines motivation as a force within an individual that has the potential to give one the drive to make the desired choice and action. Pintrich and Schunk (2002) refer to motivation as a process

that regulates an individual's goal-directed behaviour. Motivation drives an individual to initiate and maintain the desired choice and action. The drive to satisfy and fulfil a need is defined as motivation, and the need is a need for achievement (Doubé & Lang, 2012).

Different types of motivation exist, but academic motivation was considered in this particular study. Academic motivation can be defined as a self-regulated learning approach to studies. Students with academic motivation are active in their learning activities and ensure they achieve goals related to their academic performance (Eccles & Wigfield, 2002). Rakes and Dunn (2010) explain academic motivation as a reflection of a student's determination in achieving academic goals and the importance attached to academic work. Academic motivation and determination also portray academic effort invested by a student. Academic motivation consists of various aspects of which intrinsic goal orientation, extrinsic goal orientation, control of learning beliefs, and task value were considered for this study (Pintrich et al., 1991). An in-depth explanation of the above-mentioned aspects is provided below.

3.2.2   *Theoretical grounding for motivation*

The self-determination theory (Deci et al., 1991; Eccles & Wigfield, 2002) and the expectancy value theory (Wigfield & Eccles, 1992) can provide an understanding of the concept of motivation and how it affects behaviour. The self-determination theory and the expectancy value theory are explained below.

3.2.2.1   *Self-determination theory*

According to the self-determination theory, motivation is influenced by three basic human needs, namely the needs for autonomy, competence, and relatedness (Deci et al., 1991). Autonomy describes the need to be independent in decision making and course of action (Doubé & Lang, 2012). Providing an individual with the freedom to independently choose a way to approach an activity enforces a sense of control and independence. By being independent, people want to prove competence. Competence defines the need to display and exercise proficiency in a particular task or activity (Rakes & Dunn, 2010). Although independence is essential to prove competence, relatedness is also important. Relatedness refers to the need to relate and identify with the task or activity being completed (Busse, 2013). People have the need to work independently in terms of decision making and choosing

methods on how to approach activities to display competence and proficiency. Despite the need to be independent, people still need to relate and identify with whatever they are doing.

Motivation is differentiated further into three categories, namely intrinsic motivation, extrinsic motivation, and amotivation (Deci et al., 1991). The first aspect of motivation is intrinsic motivation. Intrinsically motivated individuals engage and occupy themselves with tasks and activities that they find appealing and worthy of pursuing (Deci & Moller, 2005). The tasks and activities are pursued freely without any expectation of rewards (Deci et al., 1991). Intrinsically motivated behaviour is characterised by "curiosity, exploration, manipulation, spontaneity, and interest" (Petersen, Louw, & Dumont, 2009, p.101). Likewise, Deci (1975) and Vallerand, Pelletier, Blais, Briere, Senecal and Vallieres (1992) maintain that intrinsically motivated behaviour is related to self-determination and competence. In other words, individuals who are intrinsically motivated have the perception that they have control, autonomy, and a sense of relatedness when completing and engaging in a specific task that is of interest to them (Ryan & Deci, 2000).

The second aspect of motivation is extrinsic motivation. Extrinsic motivation is characterised by three aspects, namely external regulation, introjected regulation, and identified regulation (Petersen et al., 2009). Externally regulated behaviour is behaviour that is driven and reinforced by external rewards such as recognition and approval from significant others, getting good marks, or evading penalty (Doubé & Lang, 2012). When rules and regulations are internalised as demands instead of being assimilated with one's self, an introjected regulation is evident (Petersen et al., 2009). External consequences regulate the behaviour, as the actions are perceived as mandatory. Identifying with a specific behaviour because of a view that it is relevant constitutes identified regulation (Petersen et al., 2009). For example, an individual may pursue a task or activity because of the belief that it will bring success in what he or she is doing.

The last aspect of motivation is amotivation. Behaviour is attributed to external incidents that are beyond the control or regulation of the individual concerned (Petersen et al., 2009). The behaviour is often not viewed as intentional, but due to unforeseen circumstances. A sense of, or rather lack of, accountability for one's own actions is evident in amotivated individuals.

3.2.2.2   Expectancy value theory

According to the expectancy value theory (Wigfield & Eccles, 1992), people are driven and motivated mainly by two aspects, namely expectancies of success and subjective task values. The confidence in one's own capability to perform a task effectively is referred to as expectancy of success (Wigfield, Tonks, & Klauda, 2009). Task values refer to the values attached to the task, such as the benefits, importance, and fun associated with the task (Shepperd, 2001). Expectancies and task values interact in a manner that determines and predicts the level of commitment, engagement, interest, and academic achievement.

Expectancies stem from the beliefs that individuals gradually build up about their ability to perform tasks (Borders, Earleywine, & Huey, 2004). Expectancies are a source of reference on which performance is highly dependent; it shapes behaviour and the choices individuals make. For example, when students form beliefs that they are underachievers, taking an assessment task can be avoided based on previous failure or be approached with vigour and a sense of achievement based on past success. The choice to avoid or approach a task is informed by expectancies, which are followed by confirmatory behaviour of the belief system. Therefore, the beliefs affect the performance directly. Inevitably, the expectancy is interconnected with one's sense of worth and confidence.

Whether an individual seeks to perform a task is reliant on the value the person sees and places on the task. The subjective task value can be viewed from four different subcategories, namely attainment value, intrinsic value, utility value, and cost (Wigfield & Cambria, 2010). Attainment value refers to how important a task can be for the self and one's identity. Intrinsic value is the level of enjoyment and pleasure while performing the task. The utility value is the significance and worthiness of the task. Finally, the cost is the effort that will be required by the task, for example time and effort that need to be invested in the task (Wigfield & Eccles, 1992).

3.2.3 Academic motivation and gender

Males who endorse masculinity usually measure high in academic motivation and self-efficacy in masculine and male dominated fields (Leaper & Van, 2008). Kahn, Brett and

Holmes (2011) also confirm that males who conform to traditionally masculine norms tend to measure high in intrinsic motivation in traditional fields that are of interest to them.

Van Soom and Donche (2014) found that, in comparison with males, females had a high level of motivation. In comparison with men, females had higher intrinsic motivation. The motivation was intrinsic, meaning they engaged in sports for pleasure, out of interest and not necessarily because of experience or external rewards.

Darby, Longmire-Avital, Chenault, and Haglund (2013) investigated gender differences in academic motivation over a semester period and found that motivation changed during the semester with both genders. Females ranked high in motivation early in the semester and it slowly declined over the course of the semester. Males, on the other hand, had a peak in motivation during the middle of the semester, but it declined towards the end of the semester. Many factors contributed to the decline of motivation (i.e., lack of integration between academic knowledge received and practical sessions, difficulty with the time demands on student schedules) and increase of motivation (i.e., when students enjoyed the practical sessions and were able to integrate the learnt material and apply it meaningfully). Kahn et al. (2011) highlight the differences and approaches to masculinity that might have attributed to high intrinsic motivation for males. Traditional or typical masculinity entails self-reliance winning and emotional control, which would influence academic success positively (Kahn et al., 2011).

Turkmen (2013) maintains that, although there are gender differences in academic motivation, it does not necessary imply that the academic achievement levels will be different as well. Although academic motivation can still be regarded as one of many factors that influence academic success, it is not the sole contributing factor.

3.2.4 *Academic motivation and generational status*

Many first-generation students that enrol for university degrees do so because they are motivated to change their social and financial circumstances (Ayala & Striplen, 2002). The drive to pursue higher education is influenced by the need to change their lives for the better and to be the first in their families to obtain a qualification in higher education (Blackwell & Pinder, 2014).

However, first-generation students encounter various challenges that may affect their motivation to pursue a university qualification negatively. The challenges that affect first generation students' motivation include lack of support from their families who may pressure them to seek employment instead of studying. Additional challenges also include financial problems (Blackwell & Pinder, 2014).

Despite the barriers, some first-generation students do succeed and attain their university qualifications (Ramos-Sánchez & Nichols, 2007). First-generation students who are able to persist and obtain their university qualifications may have intrinsic motivation as the main factor that contributes to their academic success (Olenchak & Hebert, 2002). Ramos-Sánchez and Nichols (2007) maintain that students' internal resources or experiences (i.e. self-efficacy and motivation) may be the main and significant factors that mediate the relationship between generational status and academic performance. In addition to the internal resources, first-generation students' socio-economic status can influence them positively to make their education a priority. Their low socio-economic status inspires them to persist and obtain their degrees in order to improve their economic circumstances (Olenchak & Hebert, 2002).

3.3   Chapter summary

In sum, the available body of research highlights the significance of internal resources (self-efficacy and motivation) as key factors in the success of university students. Motivation is amplified when individuals believe in their abilities to achieve chosen goals. Literature regarding the moderating effects of gender and generational groups is contradictory. However, a few research studies have focused on self-efficacy and motivation for first-generation students, and this study extended on the available research.

CHAPTER 4: METHODOLOGY

In this chapter, attention will be given to the methodology of the research, with particular reference to the aim, research design, and approach of the study. The following will also be discussed: sampling procedures, a profile of the participants, data collection, data analyses, and ethical considerations.

4.1 Research rationale, purpose and aim

The aim of this study was to investigate the relationship between self-efficacy, motivation, and academic performance among students from various gender and generational groups. In the following paragraphs, the rationale for including each of these constructs is explained.

The Ministry of Education (2001) paper termed "The National Plan for Higher Education" highlights the significance of identifying underlying factors that affect retention and graduation of students in the South African context. Several studies recognise academic performance of first-year students as one of the key factors in the retention and graduation rates of students at university (Boulter, 2002; Nonis & Wright, 2003). Academic success during the first year at university is important because it determines retention, persistence, and graduation (Ishler & Upcraft, 2005).

Various aspects have been highlighted as substantial predictors of academic performance. These aspects include a student's effort and determination (Fraser & Killen, 2005), socio-psychological factors (Malefo, 2000), complexity of the study material (Sansgiry, Bhosle, & Sail, 2006), and self-efficacy (McKenzie & Schweitzer, 2001). The aim of this study was to investigate the relationship between self-efficacy, motivation and academic performance among students from various gender and generational groups.

The available body of research indicates the importance of internal resources (such as self-efficacy and motivation) as key factors in the success of university students (McKenzie & Schweitzer, 2001; Prospero & Vohra-Gupta, 2007). People with higher levels of self-efficacy tend to have higher levels of motivation (Barry & Finney, 2009). Students with academic

motivation are active in their learning activities and ensure they achieve goals related to their academic success (Eccles & Wigfield, 2002). Therefore, it can be hypothesised that high levels of self-efficacy and academic motivation can help channel students' efforts in relation to academic achievement and success. Although self-efficacy and academic motivation have been researched extensively internationally, the same cannot be said about the South African context. Research on the influence of self-efficacy and academic motivation in the South African context is limited.

Gender has also been associated with academic success and self-efficacy at college (Gore, 2006). In a study by Gore (2006), females ranked higher with regard to college self-efficacy in comparison with their male counterparts. In contrast, Rayle, Arredondo and Robinson Kurpius (2005) reported that women tend to have lower self-efficacy, lower self-esteem, and less social support to pursue their education, which tend to become a barrier to women's academic performance and inevitably their persistence rate. Wright et al. (2012) suggest that this should be researched further.

Previous research studies show that first-generation students experience more barriers to academic performance than non-first-generation students do (Horn & Nunez, 2000). The influence of generational status on academic performance has been researched often, but usually with contradictory findings (Rodriguez, 2002; Vuong et al., 2010). Bui (2002) found that non-first generation students usually performed better academically than first-generation students did. In spite of this, Hertel (2002) found that there were no significant differences between first-generation and non-first-generation students' self-efficacy. Thus, further research is necessary, considering that there is little consensus among researchers on whether self-efficacy, motivation, and academic performance vary based on generational status (Rodriguez, 2002 & Vuong et al., 2010).

Thus, this particular study aimed to explore the relationship between self-efficacy, motivation and academic success among students from various gender and generational groups in the South African context. To achieve this overarching research aim, the following research questions were investigated:

1.   Are there significant differences in self-efficacy, motivation, and academic performance between gender and generational groups?

2. Can a significant amount of variance in academic performance be explained by self-efficacy and motivation?

With regard to the first research question, it was hypothesised that there will be significant differences in self-efficacy, motivation, and academic performance between males and females as well as between first-generation and non-first-generation students.

With regard to the second research question, it was hypothesised that a significant amount of variance in academic performance would be explained by self-efficacy and motivation.

4.2 Research design and approach

In this study, a non-experimental quantitative approach with a correlational and criterion group design was used.

A quantitative approach aims to generate objective and reliable statistical data for analysis. The advantage of using a quantitative approach is that data are quantifiable, and the results are considered objective. The nature of the design also enables the researcher to make generalisable comparisons with a larger population (Durrheim, 2010). In addition, large quantities of data can be collected and analysed. The disadvantage of using a quantitative approach is that it provides only a statistical description of data rather than a narrative description that is in depth and rich in detail (Cohen, Manion, & Morrison, 2000). A quantitative approach was applicable in this study because the aim of the researcher was to investigate and determine the statistical relationships among multiple variables.

Non-experimental designs are meant for observing variables as they are – without conducting any interventions (Wilson & MacLean, 2011). The advantage of using non-experimental designs is that it enables a study to be conducted as an alternative if an experiment will be unethical to do (Johnson, 2001). Various types of non-experimental designs are usually utilised in research, such as descriptive, correlational, survey, and criterion group designs (Sousa, Driessnack, & Mendes, 2007). Correlational and criterion group designs were utilised for this study.

With correlation designs, the relationship between variables is investigated (Wilson & MacLean, 2011). The major advantage of using a correlational method is that the researcher can assess the relationship between variables and determine the strength of the relationship without manipulation (Fitzgerald, Rumrill, & Schenker, 2004). A limitation is that the reason for and the causality of the relationship cannot be explained in a correlational design (Wilson & MacLean, 2011). In this study, the researcher wanted to investigate the relationship between self-efficacy, motivation, and academic performance. Therefore, the use of a correlation design was useful in establishing whether a relationship exists and what the strength of the relationship between the abovementioned variables is.

In criterion group designs, two or more groups are compared in terms of two or more variables. The advantage of using a criterion group design is that it enables comparison of the groups of interest (Durrheim, 2010). A criterion group design was appropriate for this particular study, as it enabled the researcher to compare groups (first-generation and non-first-generation students, as well as male and female students) that were of interest in the study.

4.3   Research participants and sampling procedures

The population group of interest in this study was first-year students in the Faculty of the Humanities of the University of the Free State. Male and female students, as well as first-generation and non-first-generation students were considered. In this study, participants were selected using non-probability, convenience sampling. In the non-probability sampling technique, the participants are selected by using non-random methods to be part of the sample (McMillan & Schumacher, 2001; Springer 2010). There are three types of non-probability sampling, namely convenience sampling, purposive sampling, and quota sampling (Wilson & Maclean, 2011).

In convenience sampling, participants are selected based on their availability and accessibility to the researcher (McMillan & Schumacher, 2001). The advantage of using a convenience sample is that it is inexpensive, efficient, and convenient (Wilson & MacLean, 2011). However, the limitation is that the sample may not be representative of the relevant population group (Hall, 2008). Therefore, the results may not be generalisable to the entire population but be limited to the sample obtained (Springer, 2010).

In this study, participants were recruited during lectures conducted in the Faculty of the Humanities. The main inclusion criteria for participating in this study were that participants should be registered first-year students in the Faculty of the Humanities at the University of the Free State. Students were included irrespective of their age, socioeconomic status or ethnicity. Since the two standardised questionnaires were available only in English, participants had to be proficient in English to be able to complete the questionnaire. Senior students, as well as students from other universities and faculties, were excluded from the study.

The final sample (after incomplete questionnaires had been excluded) consisted of 271 participants. The biographic characteristics of the sample are summarised in Table 1.

Table 1

Biographic Characteristics of the Final Sample

Characteristic		N	Percentage
Gender	Male	80	29.5
	Female	188	69.4
	Not answered	3	1.1
Age	17	1	0.4
	18	11	4.1
	19	57	21.0
	20	61	22.5
	21	70	25.8
	22	70	25.8
	Not answered	1	0.4
Race	Black	232	85.6
	White	11	4.1
	Coloured	14	5.2
	Other	6	2.2
	Not answered	8	3

Generational status	First generation	90	33.2
	Non-first-generation	177	65.3
	Not answered	4	1.5

The sample consisted of 271 participants, of whom 29.5% (n = 80) were male and 69.4% (n = 188) were female. Their ages ranged from 17 to 22 years, with the majority of participants (51.6%) being 21 and 22 years of age. In terms of race, four race groups were represented in the sample, namely Black (85.6%), White (4.1%), Coloured (5.2%) and Other (2.2%). With regard to generational status, 33.2% of the students were first-generation students, while 65.3% of the students were non-first-generation students.

4.4   Procedures of data collection

Data for this research study were collected during lectures conducted in the Faculty of the Humanities. The researcher addressed the class and informed them about the research study. All participants in the study were required to complete an informed consent form (Appendix A) before they completed the research survey.

The research survey consisted of a biographic questionnaire (Appendix B) and two standardised questionnaires, namely the College Self-Efficacy Instrument (CSEI) by Solberg et al. (1993) (Appendix C), and the Motivated Strategies for Learning Questionnaire (MSLQ) by Pintrich et al. (1991) (Appendix D).

Students were requested to provide their student numbers for their academic records to be obtained from Student Academic Services. Academic performance was measured by calculating an average of the students' first-year modules. Since all students were from the Faculty of the Humanities, only core modules for which most students were enrolled were considered (e.g. Psychology, Sociology, Criminology, Communication Sciences, and Languages).

4.4.1   Biographic questionnaire

A biographic form (Appendix B) with information regarding the participant's student number, age, ethnicity, gender, and generational status (parent's education) was completed by

each participant. Students' generational statuses were determined by their parents' levels of education. Students with parents who had obtained a higher education qualification were considered non-first-generation students, while students who had parents who had not attended or obtained a higher education qualification were classified as first-generation students.

4.4.2 *The College Self-Efficacy Instrument (CSEI)*

The College Self-Efficacy Instrument (CSEI) (Appendix C) was developed to assess the level of confidence students had in their ability to complete different university-related tasks effectively (Solberg et al., 1993). The CSEI has three subscales, namely Course Efficacy, Social Efficacy and Room-mate Efficacy. The CSEI consists of 19 questions. Participants have to indicate how confident they feel about each statement by circling a number from 1 (not at all confident) to 10 (extremely confident). A high score on the instrument indicates a high level of self-efficacy, whereas a low score indicates a low level of self-efficacy. Example statements include "understand your textbooks," "join a student organisation," and "manage time effectively". The CSEI was adapted for the purpose of this study. Terms that are used in the American context were replaced with more familiar South African terms. For example, "term paper" was changed into "semester assignment", "course paper" into "module assignment", "class" into "lecture", "schoolwork" into "module work", and "college" into "university".

When Solberg et al. (1993) developed the CSEI, they were interested in measuring Hispanic students' self-efficacy in relation to college activities. The psychometric properties of the CSEI were determined by using a sample of 164 Mexican-American and Latino-American college students (Solberg et., 1993). In their study, the reliability coefficient for the CSEI was 0.93, and the reliability coefficient for each of the three subscales was 0.88. Thus, all three subscales have a strong internal consistency and have proved to have good convergent and discriminant validity (Solberg et al., 1993).

Researchers interested in the self-efficacy of university students and how it affects their university experience (academic and social aspects) have used the CSEI extensively in many studies. Its popularity is also related to the strong alpha coefficients found in various studies. Studies conducted after the original study yielded reliability coefficients of 0.92 (DeWitz &

Walsh, 2002), 0.86 (Coffman & Gilligan, 2002), 0.87 (Zajacova et al., 2005), and 0.95 (Rayle et al., 2005). All the above-mentioned studies were conducted on first-year university students in the United States of America.

The Cronbach alpha coefficients of the CSEI for this study are reported in Table 2.

Table 2

Cronbach's Alpha Coefficients of the CSEI

Self-efficacy Scale	Cronbach's Alpha
Course self-efficacy subscale	0.86
Social self-efficacy subscale	0.68
Room-mate self-efficacy subscale	0.79
Total self-efficacy scale	0.87

In the current study, the Cronbach alpha coefficients for the subscales ranged from 0.68 to 0.86. The highest Cronbach alpha coefficient was that for course self-efficacy (0.86), followed by roommate self-efficacy (0.79) and social self-efficacy (0.68). The Cronbach alpha coefficient for the total CSEI scale in the study was 0.87, which is considered good and acceptable. According to DeVellis (2003), the Cronbach alpha coefficient of a scale should ideally be above 0.7 to be considered acceptable. These scores compare well with previous studies regarding the reliability of the scale and subscales.

4.4.3   The Motivated Strategies for Learning Questionnaire (MSLQ)

The Motivated Strategies for Learning Questionnaire (MSLQ) (Appendix D) was developed to measure university students' level of motivation and usage of learning resources and strategies. The aim of developing the MSLQ was to assist students to improve their learning (Duncan & McKeachie, 2005).

The total number of items in the instrument is 81 (Pintrich et al., 1991). Scoring is based on a 7-point, Likert-type scale whereby a score of 1 represents "not at all true of me" while 7 represents "very true of me". A high score on the instrument indicates a high level of academic motivation, whereas a low score indicates a low level of academic motivation.

Example items include "I think I will be able to use what I learn in this module in other modules", "I'm confident I can understand the most complex material presented by the lecturer in this module", and "I am confident I can do an excellent job on the assignments and tests in this module". The MSLQ was adapted for the purpose of this current study. Terms that are used in the American context were replaced with more familiar South African terms. For example, "class" was changed into "lecture", "course" into "module", "grade(s)" into "mark(s)", "instructor" into "lecturer", and "grade point average" into "semester mark".

The MSLQ consists of 15 subscales, of which six focus on and measure motivation, while the remaining nine subscales focus on and measure learning strategies that students employ in their studies (Duncan & McKeachie, 2005; Pintrich et al., 1991). The MSLQ is a flexible instrument. Researchers are invited to use a combination of different scales of the instrument, depending on their needs and the aim of the study (Artino, 2005). For the purpose of this study, only four subscales in the motivation section were used, namely Intrinsic Goal Orientation, Extrinsic Goal Orientation, Task Value, and Control Of Learning Beliefs (Duncan & McKeachie, 2005).

The Intrinsic Goal Orientation scale consists of four items. The scale measures the student's level of intrinsic motivation to perform academic tasks (Artino, 2005). Students who measure high on the scale are usually driven by curiosity, challenge, and mastery of the task. The Extrinsic Goal Orientation scale consists of four items. This scale represents the level to which a student views performing a task as a means to an end (Pintrich et al., 1991). The Task Value scale consists of six items. The scale refers to the value students place on the academic material in terms of appeal, importance and value (Artino, 2005). The Control of Learning Beliefs scale consists of four items. This scale measures the degree of a student's belief in his or her academic performance and that his or her efforts to learn will result in positive outcomes (Duncan & McKeachie, 2005).

Pintrich et al. (1991) determined the reliability and validity of the MSLQ using data from a sample of college students from the Midwest, United States of America. The Cronbach alphas for the MSLQ subscales are as follows for the particular scales: Intrinsic Goal Orientation scale: 0.74; Extrinsic Goal Orientation scale: 0.62; Task Value scale: 0.90; and Control of Learning Beliefs scale: 0.68 (Pintrich et al., 1991). The MSLQ has received great international acceptance, and many researchers interested in measuring the motivation

orientation and learning strategies that students use at university have used it extensively (Bong, 2001; Liu, 2003; Watson et al., 2004; Wolters, 2004). Bong (2001) obtained an alpha coefficient above 0.70 for a sample of Korean middle and high school students. In a South African sample of first-year psychology students, Watson et al. (2004) obtained an alpha coefficient of 0.79 for the MSLQ, with the motivation subscales ranging from 0.57 to 0.84. The findings with regard to the Cronbach alpha coefficients of the MSLQ in this study are reported in Table 3.

Table 3

Cronbach's Alpha Coefficients of the MSLQ

Motivation Scale	Cronbach's Alpha
Intrinsic Goal Orientation subscale	0.44
Extrinsic Goal Orientation subscale	0.62
Control of Learning Beliefs subscale	0.49
Task Value subscale	0.75
Total motivation scale	0.84

In the current study, the Cronbach alpha coefficients for the subscales ranged between 0.44 and 0.75. The highest Cronbach alpha coefficient was that of Task Value (0.75), followed by Extrinsic Goal Orientation (0.62), Control of Learning Beliefs (0.49) and lastly Intrinsic Goal Orientation (0.44). The Cronbach alpha coefficient for the total scale in the study was 0.84, which is a good and acceptable figure (DeVellis, 2003). The Cronbach alpha coefficient proved a strong internal consistency, with the exception of the scales that were below 0.60 (Control of Learning Beliefs and Intrinsic Goal Orientation). The scores obtained in this study compare well with those of previous studies regarding the reliability of the scale and subscales; for example, Pintrich et al. (1991) found the reliability of the MSLQ subscales to range from 0.52 to 0.93.

4.5   Data analysis

The Statistical Package for the Social Sciences (Field, 2013) was utilised for all the analyses in this study.

Since the scales used in this study (CSEI and MSLQ) have mostly been used on the American population (Coffman & Gilligan, 2002; DeWitz & Walsh, 2002; Liu, 2003; Rayle et al., 2005; Wolters, 2004; Zajacova et al., 2005), it was deemed necessary to determine the reliability of the scales in the context of this study. The reliability of the measures used for this specific sample was determined by means of the Cronbach alpha coefficient. Cronbach's alpha is a measure that is used to determine the internal consistency (reliability) of a scale (Tavakol & Dennick, 2011). Basic descriptive statistics were also completed to describe the sample in terms of the different variables.

Multivariate analysis of variance was used to investigate the differences in Self-efficacy, Academic Motivation, and Academic Performance between gender and generational groups. Multivariate analysis of variance (MANOVA) is a statistical method that is used to investigate differences between groups when a study has multiple dependent variables (Wilson & MacLean, 2011). A MANOVA was completed to consider the first research question: Are there significant differences in self-efficacy, motivation, and academic performance between gender and generational groups? The three continuous dependent variables were Academic Performance, Self-efficacy, and Academic Motivation. The independent variables were Gender (male and female) and Generational Status (first-generation and non-first-generation). Both the 1% and 5% level of significance were considered. The practical significance of the results was investigated by determining the effect sizes. A value of 0.2 indicates a small effect, a value of 0.25 indicates a medium effect, and a value of 0.4 indicates a large effect (Steyn, 1999).

Regression analysis was used as a statistical method to explore the relationships among the variables. The emphasis is on the relationship between a dependent variable and one or more independent variables (Wilson & MacLean 2011). In this study, the dependent variable was Academic Performance, and the independent variables were Self-efficacy and Motivation. The regression analysis was completed to consider the second research question: Can a significant amount of variance in academic performance be explained by self-efficacy and motivation? Both the 1% and 5% levels of significance were considered.

4.6   Ethical considerations

The research proposal was approved by the Research Committee of the Department of Psychology at the University of the Free State. In addition, the Research Ethics Committee of the Faculty of the Humanities at the University of the Free State granted ethical approval (Appendix E). The lecturers in the Faculty of the Humanities were approached, and they authorised the administration of the research survey in their classes. The researcher briefed all the participants about the research project and requested them to sign the given informed consent document for participation in the study.

Informed consent is essential in every research study, and data cannot be collected without a participant's consent. In order for the participants to give informed consent, the researcher should first provide the participants with all the necessary information (aim and rationale of the study, method, potential risk, compensation, and benefits, etc.) pertaining to the study. Secondly, the researcher must explain all the information in a language understandable to the participants. Thirdly, participation should be voluntary, and the opportunity to withdraw should be available. Finally, the consent needs to be formalised, usually in writing (Wassenaar, 2010).

The researcher personally briefed the participants in this study regarding the aim, rationale, method, potential risk, compensation, and the benefits involved in the study. The participants in the research study were expected to sign an informed consent form to acknowledge their participation and understanding of the study. Giving consent also meant that the participants were giving the researcher permission to use their information (including their academic records) for the purpose of the study. The English language was used for communicating all the necessary information to the participants.

Wassenaar (2010) states that the value of voluntary participation is that participants take part in the research of their own free will. The students in the study participated voluntarily, without coercion from the researcher or the lecturers, and were allowed to withdraw without any penalty at any point in the research.

According to Eckstein (2003), the participants selected for the research study must be those to whom the research question applies. Exploitation of participants should be avoided, and participants should not be used just because they are accessible to the researcher (Eckstein, 2003). The participants in this study were students to whom the research was directly

applicable, and they were selected because of the insight they might provide in answering the research questions.

A researcher should ensure that participants' involvement in the study does not cause any physical or psychological harm (Wassenaar, 2010). The study did not entail any prominent physical risks. The implications of the results of the study were discussed with the participants. The researcher should maintain the anonymity and confidentiality of all participants (Wilson & MacLean, 2011). The participants in the study were to some extent anonymous because they only gave the researcher their student number instead of their names on the biographic form. The information was used only for the research purpose. In addition, the information supplied was stored securely.

The researcher completed the study as part of the master's degree requirement. To ensure that academically and ethically sound research was conducted, a supervisor was assigned to the study to oversee the entire research process.

4.7 Chapter summary

In this chapter, the research rationale, purpose and aim of this study were addressed. Thereafter, the research design and approach were discussed to familiarise the reader with how the study was designed. A brief profile of the participants was also provided together with the procedures of sampling and data collection. This chapter also described the various statistical procedures that were conducted to answer the research questions, as well as the ethical considerations in this study. The presentation and discussion of the results follow in Chapter 5.

CHAPTER 5: RESULTS AND DISCUSSION

The purpose of this chapter is to provide findings regarding the research questions that underpin the study. In order to accomplish this, the results of the study are presented and discussed in detail. In particular, the results concerning descriptive and inferential statistical procedures are described and then discussed in relation to literature in the field. Finally, a chapter summary is provided to give a brief overview of the main arguments of the chapter.

5.1   Results

Firstly, the results pertaining to how the different variables manifested in this study, are highlighted. Secondly, the differences in Self-efficacy, Motivation, and Academic Performance in gender and generational groups are presented. Finally, the relationship between Self-efficacy, Motivation and Academic Performance are explicated.

5.1.1   *The manifestation of the different variables in this sample*

The means and standard deviations, as well as the ranges of scores obtained for Academic Performance, Self-efficacy, and Motivation are presented in the following section.

With regard to Academic Performance, the minimum score average was 18%, and the highest score was 78%, with a mean of 58% and a standard deviation of 10.

In Table 4, the minimum and maximum scores, means, and standard deviations on the Self-efficacy scale are reported.

Table 4

Minimum and Maximum Scores, Means and Standard Deviations on the Self-efficacy Scale

Self-efficacy	Minimum	Maximum	Mean	Standard deviation
Module Self-efficacy (Scale range 12-120)	28	120	85.14	18.11
Social Self-efficacy (Scale range 3-30)	3	30	19.43	6.88
Roommate Self-efficacy (Scale range 4-40)	4	40	27.20	8.99
Self-efficacy (full scale) (Scale range 19-190)	42	190	31.77	27.14

In all the subscales, a wide range of scores (corresponding to the minimum and maximum possible scores on each subscale) was obtained. The mean score for Module Efficacy was 85.14, for Social Efficacy 19.43 and for Roommate Efficacy 27.20, all indicative of scores that are slightly above average.

In Table 5, the minimum and maximum scores, means, and standard deviations on the Motivation scale are presented.

Table 5

Minimum and Maximum Scores, Means and Standard Deviations on the Motivation Scale

Motivation	Minimum	Maximum	Mean	Standard deviation
Intrinsic Goal Orientation (Scale range 4-28)	12	28	21.56	3.60
Extrinsic Goal Orientation (Scale range 4-28)	13	28	24.46	3.55
Control of Learning Beliefs (Scale range 4-28)	10	28	22.21	3.97
Task Value (Scale range 6-42)	8	42	34.04	5.50
Motivation (full scale) (Scale range 18-126)	47	126	102.28	13.37

In all the subscales, a wide range of scores (corresponding to the minimum and maximum possible scores on each subscale) was obtained. The mean score for Intrinsic Goal Orientation was 21.56, for Extrinsic Goal Orientation 24.46, for Control of Learning Beliefs 22.21 and for Task Values 34.04, all indicative of scores that are slightly above average.

5.1.2 The differences in Self-efficacy, Motivation and Academic Performance in gender and generational groups

According to the MANOVA that was completed, statistically significant differences were found on the combined variables for Gender ($F = 2.279$; $p = 0.023$; Wilks' Lambda = 0.933; partial eta squared = 0.067) but not for Generational Status ($F = 1.763$; $p = 0.085$; Wilks' Lambda = 0.947; partial eta squared = 0.053).

When the gender differences were considered for the dependent variables separately, significant differences were found in a number of variables. The significant results are summarised in Table 6

Table 6

Mean Total Scores, Standard Deviations and F-values Relating to the ANOVA for Gender Group

	Male (n=)		Female (n=)		F	p	Partial eta-squared
	M	**S**	**M**	**S**			
Academic Performance	56.09	1.18	59	0.79	4.194	0.042	0.016
Extrinsic Goal Orientation	23.44	0.40	25.15	0.27	12.751	0.000	0.047
Task value	33.28	0.63	34.8	0.43	3.911	0.049	0.026
Motivation (full scale)	99.84	1.52	104.64	1.02	6.873	0.009	0.026

Considering the information presented in Table 6, in comparison with males, females reported statistically higher levels of Academic Performance, Extrinsic Goal Orientation, Task Value, and Overall Motivation. When considering the practical significance, the partial eta-squared values all indicate small effect sizes.

5.1.3 The relationship between Self-efficacy, Motivation, and Academic Performance

To investigate how much percentage of variance in Academic Performance can be explained by Self-efficacy and Academic Motivation, regression analyses were conducted. In Table 7, the correlations among the different variables are provided.

Table 7

Correlations among Different Variables

	Academic average		Academic motivation		Self-efficacy	
	P		*P*		*p*	
Academic Average	1.000		0.077	0.104	0.017	0.388
Academic Motivation	0.077	0.104	1.000		0.251	0.000
Self-efficacy	0.017	0.388	0.251**	0.000	**	
					1.000	

** p <= 0.01 * p <= 0.05

None of the correlations with Academic Performance was significant on the 1% or 5% levels of significance. However, there was a significant correlation between Academic Motivation and Self-efficacy.

The regression analysis used to assess the amount of variance in Academic Performance that can be explained by Self-efficacy and Academic Motivation yielded an R of 0.077 and an R^2 of 0.006. Self-efficacy and Academic Motivation thus explained 0.06% of the variance in Academic Performance. This result was not significant ($F = 0.793$, $p = 0.454$).

5.2 Discussion of the results

In this section, the significant results of this study are discussed using theoretical frameworks along with existing research findings in the field. The significant results with regard to differences in Self-efficacy, Academic Motivation and Academic Performance in gender and generational groups are provided. Furthermore, the results pertaining to the relationship between Academic Performance, Self-efficacy and Academic Motivation are explained.

5.2.1 The differences in Self-efficacy, Motivation and Academic Performance in gender and generational groups

With regard to gender, this study yielded significant differences between males and females, with females scoring higher with regard to Academic Performance and certain aspects of Motivation (including Extrinsic Goal Orientation and Task Value).

In this study, females obtained significantly higher academic scores than males did. These results confirm previous research conducted by Richardson and Woodley (2003), Sheard (2009), Van den Berg and Hofman (2005) who state that women tend to outperform men in academic tasks. However, other research studies (Clifton et al., 2004; Naderi et al., 2008, Naderi et al., 2009) found no differences between males' and females' academic performance.

With regard to Motivation, females scored higher on Extrinsic Goal Orientation, Task Value and Academic Motivation (full scale). This is comparable to other studies that also reported higher levels of motivation among woman (Van Soom & Donche, 2014). Women are more motivated about academics because they like learning new things and they have a better attitude towards learning. Females are more involved and engaged in classroom- or lecture-related activities and are more focused on doing well compared to males (Lupart, Cannon, & Telfer, 2004). Furthermore, the following has been cited as the reasons for women doing better than males: commitment towards their studies (Sheard, 2009); self-esteem, perceived academic control, and coping strategies (Conley, 2001; Clifton et al., 2004). In sum, females identify with academics and they value academic achievement, which make them more motivated to pursue academics (Walker, Greene, & Mansell, 2006).

Academic motivation constructs or subscales that show variation in terms of gender include Extrinsic Goal Orientation, Task Value, and Motivation in total. According to the self-determination theory, extrinsic goal orientation or extrinsic motivation is externally regulated behaviour that is driven and reinforced by external rewards such as recognition and approval by significant others, getting good marks or evading penalty (Doubé & Lang, 2012). It holds that females would perform better than males would academically (marks) in order to possibly receive recognition and approval from significant others or simply avoid failure.

Lupart et al. (2004) report that females are more concerned about avoiding failure; therefore, they invest enough effort to succeed in their academics.

Another Motivation subscale in which females scored higher than males did is Task Value. Task value, according to the expectancy value theory (Eccles & Wigfield, 2002), refers to whether an individual sees value, importance, and pleasantness in a task or activity. For one to encounter academic achievement, academic tasks would be perceived as relevant, interesting, and of great value, which will result in ongoing engagement with academic activities and material, attentiveness, and enjoyment. The high score of females for Task Value could possibly mean they value academics and they invest the necessary effort and dedication to ensure they perform better academically. This is supported by their performance (marks), which is usually better than that of males.

One may make the deduction that placing high value on academic tasks and investing the necessary effort to obtain external rewards is an indication that an individual is entirely motivated. The value females place on their academics and their aiming to receive the rewards (marks, recognition from significant others and avoiding failure) for their efforts mean that motivation is the driving force for their actions. Overall, Motivation correlates highly with Academic Performance. Females who are academically motivated tend to apply self-regulated learning approaches to their studies, are active in their learning activities, and ensure they achieve goals related to their Academic Performance (Eccles & Wigfield, 2002).

With regard to Generational Status, no significant differences between first-generation and non-first-generation students were found in this study. This contradicts arguments of many researchers about the effect of generational status (Bui, 2002; Horn & Nunez, 2000; Ramos-Sánchez & Nichols, 2007; Warburton et al., 2001). The available body of research on the effect of generational status indicates that, in comparison with non-first-generation students, first-generation students tend to experience more difficulties at institutions of higher learning, for instance with regard to gaining access and admission to higher education (Horn & Nunez, 2000), adjusting to the transition to higher education institutions, remaining enrolled, vulnerability to lower academic performance, and attaining a degree (Ramos-Sánchez & Nichols, 2007). Although Generational Status had no significant effect on Academic Performance, first-generation students did not show any tendencies towards high levels of Self-efficacy and Academic Motivation.

5.2.2 *The relationship between Self-efficacy, Motivation and Academic Performance*

In this study, no significant correlations were found between Academic Performance and the two constructs Self-efficacy and Academic Motivation. Furthermore, Self-efficacy and Academic Motivation could not explain a significant amount of variance in Academic Performance.

There was no significant correlation between Academic Motivation and Self-efficacy. It might be hypothesised that the role of other factors that influence Academic Performance could explain why Self-efficacy and Academic Motivation had no statistically significant effect on Academic Performance in this study. Other factors that affect Academic Performance have been cited as cognitive (intelligence, language proficiency, and previous academic achievement) (Cassidy, 2012; Coetzee-Van Rooy, 2010; Dobson & Skuja, 2005; Liu & Cavanaugh, 2012; Schmitt, 2012; Smith & Naylor, 2001; Stemler, 2012) and individual psychosocial factors (conscientiousness and openness) (Conard, 2006; O'Connor & Paunonen, 2007; Poropat, 2009). Other personal factors that correlate positively with academic performance and success include the ability to deal with academic and life stress by employing effective and adaptive coping skills (Malefo, 2000) and level of self-discipline (Legotlo et al., 2002).

In this study was a significant correlation between Academic Motivation and Self-efficacy. When students are confident in their abilities to achieve academic tasks and activities, they become motivated to learn, pursue academic goals, and utilise self-regulating strategies for learning (Hsieh et al., 2007).

5.3 Chapter summary

In this chapter, the results of the study were presented and discussed. Specific attention was directed towards descriptive statistics, inferential statistics, as well as the interpretation and discussion of the results. In the following chapter, the conclusion, limitations of the study, and recommendations for further research are presented.

CHAPTER 6: CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

In this chapter, the key findings pertaining to the outcomes of the research study are presented. Subsequently, the limitations of this research study are discussed, and finally, recommendations for future research studies are made.

6.1   Key findings

The first year of university is considered as an important foundation on which subsequent academic performance and success are based. Many students struggle to adjust and cope with the challenges inherent in the first year of university. Many factors have been highlighted in research as influential in academic performance, and these factors include (but are not limited to), academic motivation (Prospero & Vohra-Gupta, 2011), self-efficacy (Choi, 2005; Pajares & Schunk, 2001), and biographic and social factors (finance, gender, and generational status). This particular study aimed to investigate the relationship between Self-efficacy, Motivation, and Academic Success among students from various gender and generational groups in the South African context. To achieve this overarching aim of the research study, the following research questions were investigated:

1.   Are there significant differences in self-efficacy, motivation, and academic performance between gender and generational groups?

2.   Can a significant amount of variance in academic performance be explained by self-efficacy and motivation?

Firstly, this study yielded significant differences between males and females, with females scoring higher with regard to Academic Performance and certain aspects of Motivation (including Extrinsic Goal Orientation and Task Value). Females are motivated to do better academically because they like learning new things; they are committed to their studies and in general have a better attitude towards learning (Lupart et al., 2004). Self-esteem, perceived academic control, and the drive to do well in academics also motivate females (Sheard, 2009).

Secondly, no significant difference was found in terms of Self-efficacy, Motivation and Academic Performance between generational groups. This contradicts previous research findings (Horn & Nunez, 2000; Ramos-Sánchez & Nichols, 2007) that highlight the effect and moderating effect of generational status. Although Generational Status had no significant effect on Academic Performance of the participants, first-generation students did not show any tendencies towards high levels of Self-efficacy and Academic Motivation.

Finally, Self-efficacy and Academic Motivation explained an insignificant 0.06% of variance in Academic Performance. Academic Motivation and Self-efficacy had no significant correlation with Academic Performance.

6.2   Limitations of this study

In this study, a non-experimental quantitative approach with a correlational and criterion group design was used. The disadvantage of utilising a quantitative research design is that it can provide only statistical descriptions of the relationships among multiple variables. Thus, it fails to provide a narrative description of the relationships among variables. To investigate the relationship between Self-efficacy, Academic Motivation, and Academic Performance between gender and generational groups, a correlational design was used. Although the design was useful in determining the relationship and the strength of the relationship among the variables, the reason for and causality of the relationship (or lack thereof) remain unanswered.

In terms of the sample, the participants were selected by using non-probability, convenience sampling. Participants were selected only from the Faculty of the Humanities at the University of the Free State. A shortcoming of using this sampling method is that the participants may not be representative of the entire population (student population) (Hall, 2008). Therefore, the results are limited and cannot be generalised to the entire population. Furthermore, in the study were more females and non-first-generation students. A more balanced ratio in the categories of gender and generational groups could possibly have improved the power of the statistical analyses.

Self-report questionnaires were used to obtain data for this research study. The disadvantage of using self-report questionnaires is that the researcher runs the risk of having participants

who do not respond truthfully to the questionnaires (Durrheim, 2010). Participants may misread and misinterpret the questions or present themselves in a socially desirable manner (Durrheim, 2010). For example, in this research study, participants may have wanted to appear more confident in their abilities to succeed in academics and more motivated than they are. Furthermore, the disadvantage of utilising self-report questionnaires is that they do not give participants the privilege of explaining their responses, which could have provided in-depth information and answers to the research questions (Hall, 2008). Another limitation of using self-report questionnaires is that participants report and complete questionnaires in accordance to how they feel at that specific time (Hall, 2008). However, the self-report questionnaires that were used have good psychometric properties.

Despite the abovementioned limitations, it is anticipated that the research findings can contribute and provide insight into the relationships between self-efficacy, motivation, academic performance, gender, and generational status in the South African context.

6.3   Recommendations for future studies

In this study, a quantitative approach was applied, as the aim was to obtain objective, quantifiable data that could explain the relationships between the variables studied. However, the results lack the rich and insightful narrative that could have given better explanations of the phenomena investigated. For future research, a more holistic approach (mixed-method, quantitative, and qualitative approach) could prove useful. The use of self-report questionnaires (quantitative approach) can be supported by conducting structured interviews and focus groups (qualitative approach) to obtain accurate descriptions of whether there is a relationship (quantitative approach) among variables and possible reasons (qualitative approach) for the existence of the relationships among variables.

Inclusion of participants from different faculties and universities through random sampling may yield results that are more generalisable to the student population in the South African context.

The MSLQ questionnaire can be used in various combinations of subscales because of its flexibility (Artino, 2005), and for this study, only the Motivation subscales were utilised. Using the scale in its entirety (Motivation and Learning Strategies subscales) might yield

different results and insight with regard to overall academic motivation and learning strategies of students.

Additionally a longitudinal research study could be conducted by other researchers interested in the topic. A long-term approach would cover for the shortcomings of conducting research once at a specific time. The attitudes and actions of participants can be observed and noted over time instead of research being a reflection of how individuals perceive themselves at a specific point in time.

6.4   Chapter summary

In this chapter, summary key findings were provided as a means of highlighting the outcomes of the research study. In the sample, female students academically outperformed male students. However, generational status had no moderating effect on students' level of self-efficacy, academic motivation and performance, as was hypothesised. Moreover, Self-efficacy and Academic Motivation explained an insignificant 0.06% of variance in Academic Performance between Academic Performance of males and females.

Additionally, limitations of the research study, with specific attention to the methodology, were presented. Clear recommendations for future research were also made to highlight gaps in the body of knowledge that can still be filled.

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APPENDIX A: INFORMED CONSENT

INFORMED CONSENT

I, Silindele Mbatha, hereby request your participation in this particular study that is part of a research project in the University of the Free State concerning the learning experiences of first and non-first-generation university students. You were selected as a possible participant because of the insight you might provide in answering the research question.

In order to gain insight and information required in the study a biographic form and two standardised questionnaires will be administered and later used for data analysis.

Participation is voluntary. Taking part in the study will not lead to any monetary rewards or any form of compensation. If at any point during the research study you want to withdraw, you will be allowed without any penalty.

If you have any queries or questions later on after the questionnaires have been administered, you are welcome to contact the researcher Silindele Mbatha on email: silindelembatha@yahoo.com

By signing the informed consent you indicate your willingness to complete this form and grant the researcher permission to use your student number to obtain you academic record from Student Services for research purpose only.

You also acknowledge that you have understood the above mentioned information and that the information you provide in the study is true and accurate.

Signature of participant_____ Date_____

Signature of researcher_____ Date_____

APPENDIX B: BIOGRAPHIC FORM

BIOGRAPHIC FORM

PERSONAL BACKGROUND

Gender	Male	Female

Age	17	18	19	20	21	21+

Race	Black	White	Coloured	Indian / Asian	Other

EDUCATIONAL BACKGROUND

Student number	

Degree enrolled for	BSocSc	BA	BSc	BCom	Other

Year of study	1	2	3	4	Other

Have any of your parents / caregivers ever studied at a university or higher education institution?	Yes	No

APPENDIX C: COLLEGE SELF-EFFICACY INVENTORY (CSEI)

COLLEGE SELF-EFFICACY INVENTORY (CSEI)

INSTRUCTIONS: Responses must be recorded on a 10-point scale.

Please use X to indicate you response: 1 = not at all confident to 10 = extremely confident

ITEM	1	2	3	4	5	6	7	8	9	10
1. Research a semester assignment.										
2. Write module assignments.										
3. Do well on your exams.										
4. Take good lecture notes.										
5. Keep up to date with your module work.										
6. Manage time effectively.										
7. Understand your textbooks.										
8. Get along with roommate(s).										
9. Socialize with your roommate(s).										
10. Divide space in your apartment/room.										
11. Divide chores with your roommate(s).										
12. Participate in lecture discussions.										
13. Ask a question in a lecture.										
14. Get a date when you want one.										
15. Talk to your lecturer										
16. Talk to university staff.										
17. Ask a lecturer a question.										
18. Make new friends at university.										
19. Join a student organisation.										

APPENDIX D: MOTIVATED STRATEGIES FOR LEARNING QUESTIONNAIRE (MSLQ)

MOTIVATED STRATEGIES FOR LEARNING QUESTIONNAIRE (MSLQ)

INSTRUCTIONS: Please indicate your response by writing the appropriate number response in the column provided. 1 = not at all true of me to 7 = very true of me.

ITEM	1	2	3	4	5	6	7
1. In a lecture like this, I prefer module material that really challenges me so I can learn new things.							
2. If I study in appropriate ways, then I will be able to learn the material in this module.							
3. I think I will be able to use what I learn in this module in other modules.							
4. Getting good marks in this lecture is the most satisfying thing for me right now.							
5. It is my own fault if I don't learn the material in this module.							
6. It is important for me to learn the module material in this class.							
7. The most important thing for me right now is improving my overall semester mark, so my main concern in this lecture is getting good marks							
8. If I can, I want to get better marks in this lecture than most of the other students.							
9. In a lecture like this, I prefer module material that arouses my curiosity, even if it is difficult to learn.							
10. I am very interested in the content area of this module.							
11. If I try hard enough, then I will understand the module material.							
12. The most satisfying thing for me in this module is trying to understand the content as thoroughly as possible.							
13. I think the module material in this lecture is useful for me to learn.							
14. When I have the opportunity in this lecture, I choose module							

assignments that I can learn from even if they don't guarantee a good mark.							
15. If I don't understand the module material, it is because I didn't try hard enough.							
16. I like the subject matter of this module.							
17. Understanding the subject matter of this module is very important to me.							
18. I want to do well in this because it is important to show my ability to my family, friends, employer, or others.							

APPENDIX E: ETHICAL CLEARANCE

25 February 2014

Dr L. Naudé
Department of Psychology
UFS

Ethical Clearance Application: Access with Success: Academic facilitator sessions in the extended programme of the Faculty of the Humanities

Dear Dr Naudé

With reference to your application for ethical clearance with the Faculty of the Humanities, I am pleased to inform you on behalf of the Ethics Board of the faculty that you have been granted ethical clearance for your research.

Your ethical clearance number, to be used in all correspondence, is:

UFS-HUM-2013-17

This ethical clearance number is valid for research conducted for one year from issuance. Should you require more time to complete this research, please apply for an extension in writing.

We request that any changes that may take place during the course of your research project be submitted in writing to the ethics office to ensure we are kept up to date with your progress and any ethical implications that may arise.

Thank you for submitting this proposal for ethical clearance and we wish you every success with your research.

Yours sincerely,

Katinka de Wet

Ethics Committee (Faculty of the Humanities)

Copy: Ms Charné van der Walt (Research Co-ordinator: Faculty of the Humanities)

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