

**UNDERSTANDING ACADEMIC EXPERIENCE OF SOUTH
AFRICAN FIRST YEAR STUDENTS STUDYING
AGRICULTURE, ENGINEERING AND SCIENCE (AES) IN
UNIVERSITY USING AFRICENTRIC PARADIGM**

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Humanities, University of Kwa-Zulu Natal, in partial fulfilment of the
requirements for the degree of Masters in Counselling Psychology**

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DECLARATION

I, the undersigned, **Nonhlonipho Biyela (212525346)**, declare that this dissertation is my own original work, gathered and utilized especially to fulfil the purposes and objectives of this study, and has not been previously submitted to any other university for a higher degree.

I declare that this dissertation entitled “Understanding academic experience of South African first-year students studying Agriculture, Engineering and Science (AES) in university using Africentric paradigm” is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

Nonhlonipho Biyela

Date 212525346

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ABSTRACT

South African universities are characterised by high dropout rates particularly amongst students in their first year of university and dropout rates ultimately have an effect on graduation rates. This particular trend is more evident in the faculty of Agriculture, Engineering and Science (AES). This study aimed to understand and explore the academic experiences of first-year students by investigating the external and internal factors that predispose the students to be more likely to drop out of university or to be successful in their studies, and to explore further how these factors shape the experiences of the students in the university. The study also examined the relationship between the external and internal factors that impact on the experiences of the students. The study made use of the Africentric paradigm to understand the needs of African students and the context in which they are living and studying. The study made use of a homogeneous sample of 125 first-year students who answered questionnaires with regards to their first-year experience at the University of KwaZulu-Natal. The data was analysed through an initial factor analysis as it allowed for highly correlated variables to be clustered together. These variables were then subjected to further descriptive analysis. The study indicated several factors such as academic preparedness, a social adjustment which can affect the academic experience of a student during their first year of study.

Key words: First-year student, dropout rate, throughput rate, Africentric

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LIST OF ABBREVIATIONS

AES	Agriculture, Engineering and Science
B. Sc.	Bachelor of Science
CHE	Council on Higher Education
DHET	Department of Higher Education of Training
DoE	Department of Education
FYE	First Year Experience
HE	Higher Education
KMO	Kaiser-Meyer-Olkin
NSFAS	National Student Financial Aid and Scheme
Res	(Student) Residence
SES	Socio-economic status
SPSS	Statistical Package for the Social Sciences
SRC	Student Representative Council
SSS	Student Support Services
UKZN	University of KwaZulu-Natal

CHAPTER ONE: INTRODUCTION

1.1. Introduction

There is growing interest amongst international and local universities in the retention of undergraduate students. This is motivated by the high dropout rates and academic exclusion of students within the first year of study. This particular trend, according to prior research, is most prominent in the school of Agriculture, Engineering and Science (AES), as these students are introduced to a completely different environment with high demands and expectations (Jacobs, de Bruin, van Tonder & Viljoen, 2015). This is due to the rigorous curriculum that the students are introduced to; and the mathematics gap between matric and university (Jacobs et al., 2015). Students are expected to be equipped with skills that will allow for higher levels of engagement with academia and the social environment, but such institutions fail to acknowledge the prior learning experiences of students (Mkoto-Nosisana, 2015). This research aims to explore the current presenting problem by understanding the experiences of first-year university students.

As an attempt to understand and explore the presenting problem, this research utilized the Africentric paradigm as it is able to conceptualize the needs of African students and the context in which they are living and studying (Sharma, 2010). The Africentric paradigm allows for the recognition of South Africa's educational history as an essential component in understanding the current pedagogies that are persisting in South Africa's educational system to account for the unique experiences of South African students (Nenty, 2009). The paradigm is able to present an understanding of the beneficiaries (students and their parents) and the organisation (the university and the education system) associated with the study.

This research focuses on the experience of students in the field of AES at the University of KwaZulu-Natal (UKZN), as this field of study has higher demands and expectation in terms of its curriculum. Unlike most studies that tend to focus on a single contributing factor, this study has explored many possible factors that can possibly shape the academic experience of students. The study conceptualized the main key areas of interest to be external and internal factors. External factors are simply regarded as the conditions or systems existing in the environment of the student which influence their experience. Internal factors are those that are regarded as individual characteristics which also influence how students experience university (Sharma, 2010). Furthermore, in order for the study to be successful in answering the research questions, the relationship between external and internal factors is explored.

1.2. Background of the Problem

Over the past few years, there has been an increase in the number of students accessing higher education as departmental policies encourage the widening of access (DHET, 2012). This is as a result of the transformation of higher education that has created equity in terms of all races and genders to be able to readily access higher education (van Zyl, 2014). The increase in the number of students accessing higher education institutions, however, has not translated to successful graduation rates. Instead many students encounter problems in the early months of their university study which is evident in the high dropout rates and academic exclusion within the first year of study (Jacobs et al, 2015).

There is a lot of argument surrounding the likely cause of the high dropout rates. According to most university academics, student preparedness and entry marks are the highest determinants of success, while others maintain the importance of exploring non-academic factors (Mapuranga, Musingafi & Zebron, 2015). There is also a need to understand the psychosocial dynamics that can cause difficulty for a student to be able to perform well at university. Additionally, it needs to be understood that academic and non-academic factors do not operate in isolation, rather, there is an interaction between the two that has an influence on the experience of students (Murray, 2014). Therefore, it is important to understand all of these factors and the role that they play in academic performance.

Understanding the preparedness of students is an important determinant in their studies. Preparedness will be discussed in terms of academic preparedness and non-cognitive or emotional preparedness. According to most thinking by university lecturers, a student's matric results are a good measure for indicating if the student is academically ready for university (Mapuranga et al., 2015). The logic behind this ideology is that the student has acquired sufficient academic knowledge, which will act as the foundation for new knowledge that will be acquired in university. This kind of thinking is reflected in the required entry points for Bachelor of Science (B. Sc.) that tend to be higher than other colleges. Most South African students are English second language speakers and this can affect their reading and writing abilities (Chokwe, 2013). This affects the ability of the student to acquire knowledge effectively from provided texts. Poor writing skills also affect the ability of the student to present all the information that they have learnt effectively (Chokwe, 2013). These kinds of difficulties impact on the student's level of engagement with the course (Ivala & Kioko, 2013).

On the other hand, emotional and psychological preparedness must be explored as well. Most first-year students have to move away from home, and in this case they must demonstrate maturity in terms of self-discipline and self-motivation (Mudhovozi, 2012). The student is now in charge of ensuring that he or she makes it to class on time, attends all classes and studies regularly. Such maturity of a student can also be noted in their help-seeking behaviour which is the ability of the student to be able to seek help by means of using academic support services (Scott, 2009). The student also needs to adjust to the social environment. For students who move away from home, it is essential that they create a new support system for themselves by making new friends. A lack of a healthy support system can affect students' psychological and social needs. Furthermore, if students feel excluded from activities with their peers, it can have an impact on their self-esteem and reduce their sense of belonging in this new environment (Ellery & Baxen, 2015).

The state of South Africa in terms of economics and social justice gives other possible factors that influence the experience of AES students in their first year of study. Due to the injustices of the past, most government schools lack the necessary resources for quality education such as books and computers (Sondlo, 2013). The economic background of the students can also add stress when they are unable to pay their fees and spend the rest of the year anxious that they will be able to continue with their studies the following year (Harding, 2011). The yearly strikes that occur in universities which are as a result of social injustice such as "fees must fall" can leave students traumatised and dreading being on campus due to the violence that they may experience (Mason, 2017).

All of the above-mentioned factors will be discussed further in chapter two, as they play a profound role in how AES students experience their first year of study at a university. As a result, the students' perceived or actual experience of the university can determine their success in the first year of study and beyond, hence, making it a key objective for universities to create an environment that promotes learning and inclusion, and providing the necessary programmes to assist students along the way.

1.3. Statement of the Problem

A significant amount of literature focuses mostly on the students' abilities to be able to integrate themselves to the university successfully and focuses on their entry marks. This view places most of the responsibility and blame on the students' not being academically prepared for university. This view of the current presenting problem neglects a number of

key areas that have a significant impact on the academic experiences of AES students. It neglects factors such as the prior learning experiences of the student, the socio-economic status and other social aspects of the student. This view also neglects the role of the education system and the university. This is the particular gap in the knowledge that the present study aims to investigate, also providing more substantial evidence for these factors contributing to the presenting problem. This study also aims to create an integration of knowledge, as external and internal factors are normally addressed separately from each other (Mapuranga et al., 2015)

1.4. Rationale

The purpose of the study was to investigate the factors that influence the academic experience of AES students in their first year of study at university. The aim was to explore many of the possible external and internal factors that can have an impact on the academic experience of students in the university. The desired outcome was for a better understanding of the experiences of first-year students which can be useful knowledge in improving student engagement and student support programmes at the university, which in turn can encourage the retention of students and promote academic success.

1.5. The significance of the Study

By exploring the personal or internal psycho-social factors that are normally ignored is of significance because universities can be able to understand their students better and be better equipped to deal with such issues, for instance, first-generation students. Through such knowledge, universities are able to improve their current support services rendering them more effective to deal with the needs of the students. Addressing the state of the education system creates the opportunity to improve curricula and programmes within the university to assist students who are struggling.

1.6. Research Questions

The current research aims to investigate the external and internal factors that influence the academic experience of first-year students studying AES. The hypothesis is that the internal and external factors have an influence on the academic experience of first-year AES university students. Therefore, the research questions are:

- What are the external factors that influence the academic experience of first-year students in the College of Agriculture, Engineering and Science (AES) at the University of KwaZulu-Natal?

- What are the internal factors that are influencing the academic experience of first-year students in the College of Agriculture, Engineering and Science (AES) at the University of KwaZulu-Natal?
- What is the relationship between internal or psychological factors and external factors that influence the academic experience of targeted first-year university students?
- Is the questionnaire a valid tool for reflecting the experiences of the students in their first year of study at university?

1.7. Research Design

A primarily quantitative approach was used. The participants in the study were students of UKZN from the Pietermaritzburg campus. All the participants were AES students who represented both genders and all the races which are present on the campus. Convenience sampling was used as the population of the study was directly available to the researcher. A questionnaire was utilized to gather relevant information required to investigate the research questions from 125 participants. The questionnaire was semi-structured, containing a majority of closed questions with a few open-ended questions at the end of each section. Data analysis was conducted through the use of the statistical tool SPSS (Statistical Package for the Social Sciences) and a factor analysis was carried out.

1.8. Assumptions and Limitations

The assumption of the study is that the inclusion criteria of the sample were appropriate, hence it was assumed that participants had all had similar experiences that were being investigated. It is also assumed that participants answered the questionnaires truthfully. The limitation of the study was that a questionnaire was used which did not allow the students to present other factors which were not presented in the questionnaire. To get around this particular issue the questionnaire presented a substantial number of possible factors that could influence the experiences of the students.

1.9. Conclusion

The dropout rate and academic exclusions in South African universities is a cause for concern particularly in the college of AES. The key to addressing the issues lies in understanding the academic experiences of students by acknowledging both the external and internal factors that influence their experiences at university (Mapuranga et al., 2015). An integrative approach to gathering knowledge can assist in bringing about a holistic view of the problem

at hand. It also gives the students a voice to communicate areas of difficulty and their resilience during their first year of study.

CHAPTER TWO: LITERATURE REVIEW

2.1. Introduction

The ever-growing number of students who drop out within their first year of study in university remains a major area of concern for international and local universities. This problem has become an area of focus for a majority of scholars globally (Mapuranga, 2015). This trend is no different in South African universities as it is impacting negatively on the desired national norm of an 80% success rate which is the target for the Department of Higher Education and Training (DHET) (Moodley & Singh, 2015). This has resulted in a vast amount of literature regarding the problem, with the aim of identifying the factors that are responsible for the observed global trends and the ability to improve on the effectiveness of retention programmes.

The issue of students dropping out in university is noted year after year. The efforts made by the DHET in increasing access to university by implementing policies that encourage equality through the enrolment of black and female students has not resulted in an improved success rate and throughput rate (Letseka & Maile, 2008; Scott, 2009). Context is an important part of conceptualising the manifestation of the problem which is evident not only in the first year dropout rates but also in poor matric performance. South Africa has a rich history of colonialism that has been corroding African identity rapidly since its inception and has an influence the education system (Coetzee & Le Roux, 2001). It is therefore important to acknowledge that universities do not exist in a vacuum and that they are not isolated from social forces that continue to influence how they operate and the progress of their students (Beckmann, 2008).

The dropout rate of students at the university has a vast number of consequences for the DHET, the university, the economy and the labour sector, and as well as for the students. The number of students dropping out of university leads to the loss of approximately R4.5 billion a year for the DHET and the institutions (Letseka & Maile, 2008). This has a negative effect on the economy and the ability to finance more students in the following year. The dropout rate also has a negative impact on the labour market as fewer students are able to graduate with the necessary skills; this is more so in the AES field as there is a shortage of skilled experts in South Africa (McGhie & du Preez, 2015). Dropping out of university has a profound negative effect on students' self-image and confidence in their abilities. The

magnitude of them leaving university also extends beyond the students to their families and the community as this means that the community loses good role models (Bojuwoye, 2002).

The origins of the presenting problem are very diverse and each factor requires the same amount of investigation. The intention of this literature review is to present a comprehensive account from the literature that has been collected from the past decade up to the present moment regarding the topic. The literature review focuses on international and local studies and discusses the external factors that impact on the dropout rates. It also discusses the internal or psychological factors that result in students dropping out of university.

2.1.1. International trends

In order to conceptualize the problem of students not completing and dropping out of university during their first year of study, this study looks internationally as well as locally. Poor retention and dropout rates have been evident in a number of European, American and Australian universities. The issue of student dropout rates is not an issue only of this decade as it was evident at Victoria University in Australia which had a dropout rate of approximately 25% between the years 1994 to 2003, while in the United Kingdom during the same period the University of Leeds had a 8,6% dropout rate and the University of Edinburgh had a 22.0% dropout rate (Moodley & Singh, 2015). In a study by Fisher & Engemann (2009) a 43% dropout rate in Ontario universities in Canada during the years 1998 to 2003 was reported. The dropout rate affects the success rate of higher institutions. In the United States of America, the overall graduation was 33.2 % in the year 2000 (Jacobs et al, 2015). In the same year, the United Kingdom achieved a success rate of 37.5% and Australia achieved a 36.3% success rate (Jacobs et al, 2015).

On the African continent, the issue of students dropping out of university manifests itself slightly differently from developed countries as socio-economic and political issues have a major impact on higher education. African universities experience a low participation rate as compared to international universities due to such issues (Negash, Ulusola & Colucci, 2010). The participation rates are particularly low in Sub-Saharan Africa with a participation rate of 7%. In low-income countries, higher education participation has improved marginally from 5% in 2000 to 7% in 2007 (Sondlo, 2013). Developing countries tend to have the lowest retention rates compared to developed countries as higher education in these countries has to deal with lack of infrastructure, an imbalance in student-lecturer ratio, overcrowded lecture theatres and lack of access to computers. The students also have to deal with poverty and the

economic demands of their family which distract them from their academic demands (Negash et al., 2010).

2.1.2. Local trends

The trend that has been noted in universities from abroad is no different in South African universities. According to a cohort study by Letseka and Maile (2008) for the Human Sciences Research Council in which they followed 120 000 students that enrolled in institutions of higher education in 2000, 36 000 (30%) students dropped out during their first year. A subsequent 24 000 (20%) students dropped out during their second and third year of study. The dropout rate had an effect on the throughput of students, with only 22% of students completing their bachelor's degree within the specified three years duration. This trend is evident in the college of AES, according to the Council on Higher Education (CHE) (2013: 43) who reported that the completion rate for science degrees was 23%, science diplomas 14%, engineering degrees 23%, and engineering diplomas 5%. These figures are cause for concern in this particular area of study.

2.2. Definition of student dropout, retention and throughput

In the process of trying to deconstruct the complex issue of student dropout rates in university, there are terminologies that are used to explain the presenting phenomena of student dropout rates. The use of these terminologies can vary amongst universities and countries. Therefore it is essential to define these terminologies to create coherent understanding (Sondlo, 2013). These terminologies are also met with a number of complexities such as in dropout rates as there are situations in which a student can enrol in a programme and then drop out and return in another year to continue with their studies (stop-outs). Due to the complexes associated with these terminologies, the following broad definitions will be used in the present study to ensure consistent understanding.

- **Dropout or attrition rate** is defined as the percentage of students that enrol in a programme for a particular year but discontinue their university studies in that year without obtaining a degree. Other terms that are used to represent the same phenomena are departure, withdrawal, academic failure and non-continuance (Sondlo, 2013).
- **Participation rate:** This is the total headcount enrolment over the national population of 20-24 years old, calculated as a percentage (CHE, 2016).
- **Retention rate** is defined as the number of students who are enrolled in a programme for a particular year and are actively engaged in learning without discontinuing their studies

for that particular year and proceed with the programme the following year in the same institution (Sondlo, 2013).

- **Throughput rate** calculates the number of first-time entry of undergraduate students of a specific cohort of a specific year who have graduated either with the minimum time or up to two years beyond the minimum time, to the number of students in the baseline of the chart (CHE, 2016).

2.3. Theoretical Framework

In an attempt to understand and explore the presenting problem, the Africentric paradigm is best suited for conceptualizing the needs of African students and the context in which they are living and studying (Sharma, 2010). In this thesis African is understood as someone who is born and is an inhabitant of Africa, it includes all the race groups represented in South Africa (Fourie, 2015); however there is specific mention of black students as they formed the majority of the population sample. It is important to use an indigenous framework in order to identify effectively the issues that are faced by South African students. The Africentric paradigm is able to achieve these objectives as it provides the tools necessary for critical reflection on the history of South Africa and the pedagogies that still persist in higher education. It is able to achieve this as its core assumptions have intrinsic knowledge of the values and cultural background and an understanding of the reality of experiences of South African students (Graham, 1999).

It needs to be noted that ‘Afrocentric’, ‘Africentric’ or ‘African-centred’ are terms that are used interchangeably to represent the concept which categorises a quality of thought and practice which is rooted in the cultural image and interest of African people and which represents and reflects the life experiences, history and traditions of African people as the centre of analyses (Tinto, 1975). This research will use the term ‘Africentric’ throughout.

The Africentric perspective is able to acknowledge the inequality and injustice created by the apartheid era. Due to its assumptions, the Africentric perspective is truly able to understand the experiences of Africans. It pays attention to the interconnectedness of all things within that system (Sharma, 2010). It has an understanding of cultural influences and how these cultural beliefs can influence the transition to university. The Africentric perspective is not only a good tool for understanding socio-political systems but it also has a good understanding of the needs of the individual. It is able to investigate the collective and individual identity of the student and the value of interpersonal relationships (Graham, 1999).

2.4. Reasons for dropout: External factors

With the aim of conceptualizing the difficulties that meet first-year university students, it is important to look at external factors and the impact they have in the academic experience of students. The external factors are understood from the Africentric perspective as those that extend beyond the students' capabilities, where the student has little or no control regarding these factors (Tinto, 1975). External factors can, therefore, be understood to be elements or systems that are present in the student's environment such as the history of the country, the education system, or the economy. These factors exist beyond their immediate relationships. These systems tend to have a direct or indirect influence on the student. These systems include political history, society, culture, and economics both in the past and present (Sondlo, 2013). The Africentric perspective holds the belief that there is an interconnectedness of all things within the system, hence these mentioned factors play a role in the academic experience of first-year students.

Very frequently the social system external to the university can affect the integration of the student into the more limited social and academic system in university (Tinto, 1975). In relation to this statement, it is therefore important to investigate the external factors. Historically, education in South Africa has played a pivotal role as an external factor and the residual social and academic issues that remain, the gap between high school and university, academic preparedness and career guidance or lack thereof, continue to have a negative impact on academic performance. It is important to discuss the extent to which they play a role in the academic experience of first-year university students. This also means that not all of the responsibility is placed on the student, but that higher education and the university take responsibility for their own shortcomings that contribute to the issue at hand (Mapuranga, Musingaafi & Zebron, 2015).

2.4.1. History of education in South Africa

The history of South Africa has played a crucial role in the operation of the education system. The apartheid era did not only shape education during the colonial times but its legacy still lives on in the education system at present. In 1953 the Bantu Education Act was implemented, which had a profound impact on education (Ramoketsi, 2008). Before the law was passed most African schools were run by missionaries with some assistance from state aid. However, once this law came to pass state aid was conditional to acceptance of the

racially discriminatory curriculum. This curriculum was based on unfounded stereotypes about black people and their academic abilities (Hartshorne, 1992).

The aim of Bantu Education was to equip black learners with skills that were required for working for white people with the intent of benefiting the government. The aim of Bantu education was to serve the interests of the white government and prevent black people from acquiring quality education (Ramoketsi, 2008). The Bantu Education Act created segregation and separated the education system which resulted in an unequal education for black learners and this created separate education systems in the country. Bantu education schools suffered enormous neglect from the government which resulted in enormous disparities in funding between black and white schools (Hyslop, 1999). African education was characterised by overcrowded classrooms, lack of textbooks, inadequate instruction and poor training of teachers. Furthermore, this kind of education undermined the mental abilities of students and introduced oppression into the classroom. This Act, according to Africentric thinking, affected the identity of black learners making them feel inferior (Sharma, 2010).

Bantu education had lasting implications for the education system, curriculum and generations of black learners. African schools that were under the Bantu education system still struggle with infrastructure, resources, skilled teachers and overcrowding (Ramokesti, 2008). This affects the ability of learners to acquire quality education. Bantu education not only affected the education system and the curriculum but it also had a negative effect on generations of black people and how they view education (Graham, 1999). This meant that most black people either dropped out of school or were the product of poor education which now affects the current generation as they are unable to assist their children with school-related work. This also means that most black communities lack positive role models who are university graduates, which in turn affects how a student may view himself or herself in relation to the collective (Ramokesti, 2008).

The Department of Education (DoE) acknowledges these significant factors and problems persist within the education system. Hence there are ongoing changes and amendments in the curriculum, the training of teachers, teaching time compared to other activities and the availability of learning and teaching materials such as textbooks (Du Plessis & Gerber, 2012). There are several other issues that have an impact on schooling in South Africa such as curriculum design, language issues, the use of technology and the power balance between

the school and the parents. These factors can affect the quality of education that the students receive and also their academic preparedness (Du Plessis & Gerber, 2012).

2.4.2. The gap between high school and university

The increase in the dropout rate and the decrease in the success rate in science modules such as Mathematics, Physics and Chemistry at first-year level is a serious challenge for South African higher education (Jacobs et al., 2015). This noted trend brings up questions regarding the academic preparedness of students for these modules. Poor academic preparedness can be the result of the student's previous academic experience. The DoE is continuously making efforts to improve the curriculum in order to bridge the gap and improve the chance of success at university (Du Plessis & Gerber, 2012).

Academic preparedness for the university is defined as possessing sufficient content knowledge and skills in reading and mathematics (Porter & Polikoff, 2012). This means that the student acquires the necessary entry marks to be accepted into university and to be able to cope with academic content. In South Africa, most Engineering programmes require at least two years of mathematics and most students struggle to pass the first-year courses of mathematics (Jacobs et al., 2015). This is largely due to the mathematics gap between high school and university. A mathematical knowledge gap is defined as the lack of a smooth transition from high school mathematics to university first-year mathematics for students majoring in science, it reflects the disparities between the knowledge possessed by school leavers and the knowledge required for first-year entry into mathematics courses (Basitere & Ivala, 2015).

The knowledge gap includes a lack of essential technical facility, the ability to undertake numerical and algebraic calculations with efficiency and accuracy, and a marked decline in analytical powers when faced with simple problems requiring more than one step (Porter & Polikoff, 2012). Most students entering higher education fail to understand that mathematics is a precise discipline which requires exact, reliable calculations and logical exposition (Basitere & Ivala, 2015). The effects of the knowledge gap in South Africa are evident when students struggle in their first-year mathematics courses and this observed trend causes some students to become discouraged from studying mathematics and physical science because they are perceived as cognitively difficult (Jacobs et al., 2015).

The DHET has developed a number of strategies to try to bridge the gap between matric and university. Extended curriculum programmes have been introduced to support students who are underprepared for the university. Extended curriculum programmes are four years in duration instead of the three years of a standard degree (Stacey & Gerbie, 2008). These programmes are meant to rectify the difficulties that students have with regards to mathematics and physics, such as a low matric mark for these subjects, lack of confidence and the mindset that these subjects are difficult (Du Plessis & Gerber, 2012). Such a programme is meant to enable the ability of the students to grasp mathematical concepts.

2.4.3. Academic preparedness: Educational system

Academic preparedness is a broad concept which is related to the preparedness of any given student to engage in a postsecondary curriculum upon enrolling (Porter & Polikoff, 2012). This concept can be broken down into three components, namely, academic readiness which focuses on academic content, non-cognitive skills such as self-motivation and self-efficacy, and environmental factors which include parental support and finances. In this section, the focus is on external factors of academic preparedness that are influenced by the DoE, schools and teachers. This section focuses on the role that these stakeholders play in preparing students for postsecondary curriculum.

A significant number of students are insufficiently prepared for the university as a result of poor schooling which puts them at a disadvantage (Chokwe, 2013). This is typically true of schools that were historically disadvantaged during the apartheid era as such schools continue to be lacking in terms of infrastructure, resources and economics. Such factors play a major role in the preparation of students for higher education. It is important that the school provides the necessary information and provides students with the necessary skills that can facilitate transition and success at university (Sondlo, 2013).

The transition from high school to university is a major cause for concern globally and this is evident in the extensive literature available on the topic. Within the first few months of university, it becomes very apparent that students are ill-prepared for university (Mapuranga, 2015). According to a survey conducted in Australia during 2004, approximately 60% of first-year students did not feel adequately prepared for university and about 30% of these students felt ill-prepared to choose a university course after leaving high school (Krause, Hartley, James & McInnis, 2005).

The role of the school is significant in preparing its students for university. As already mentioned in previous sections, the majority of schools in South Africa lack important resources such as textbooks, computers, laboratory equipment and libraries (Ramokesti, 2008). These resources are significant in the preparation of students. Most South African schools the lack in the area of computer literacy training which underprepared these students for university. Upon arrival, they realise that the skill that they lack is essential for their progress. Most students assume that assignments are handwritten as in high school, but this is not the case as they have to transition into typing all of their assignments (Sondlo, 2013). Universities have integrated technology into their teaching and learning systems by using blended learning. Blended learning is defined as the emergence in educational technology where physical and virtual environment are blended to support learning in university courses (Stacey & Gerbie, 2008). Students mainly have to use a computer or their phones to access the majority of their course material and additional materials such as articles.

Teachers are also important in preparing the student for the university as teachers are responsible for developing healthy classroom learning habits for students (Brinkworth, McCann & Matthews, 2008). According to Brinkworth et al. (2008), the pressure that is placed on matric teachers to cover a certain amount of the curriculum in a short period of time and also get more learners into university may need increased assistance. This creates unrealistic expectations of the amount of academic support that they will receive in university. This also affects their learning habits, as there is a noted mismatch between the learning habits of high school learners and those that are accepted into university (Krause et al, 2005). Learning in South African schools is particularly dependent on the teacher with learners having very little independence in their learning. This creates the expectation that the university will be the same. However, at university, the majority of the responsibility is placed on the student, which becomes an overwhelming task for some students (Brinkworth et al, 2008).

2.4.4. Career guidance

Career guidance is an important part of educational success, it allows for students to explore their interests and to be matched with the best suitable career. Choosing a career is a vital step in students' lives as it impacts every area of their lives (Goliath, 2012). Career guidance is defined as a service or activities intended to assist individuals at any point in their lives to make educational, training and occupational choices to manage their career (Cedefop, 2008).

It empowers the student with their personality traits, their interests and values. Proper career guidance does not only ensure that the student will be successful in their career but also that they can be successful in university. Career guidance as a factor in students dropping out in the university has been neglected. According to a study by Manik (2014), poor career guidance and no career guidance prior to entry into university appeared to contribute to the departure of students.

A large number of students in South African schools do not receive career guidance and this can lead to career indecision. Career indecision is defined as a state of indecision regarding occupational interest or career path (Goliath, 2012). Most students enter university with very little information regarding the careers of their choice. This creates unrealistic expectations regarding their academics and affects student preparedness. Students tend to realise that there is a mismatch between their career pathway and their needs when they begin to perform poorly and lose interests in their studies (Brinkworth, et al., 2008). It is only at this point that a number of them seek career guidance from student services and revisit their prior career choice.

A lack of or no career planning can have a negative impact on the student's success in university. In a study conducted by Moodley and Singh (2015), many of the participants mentioned either being coerced by a family member or a friend into registering for a certain degree programme. This ultimately led to many students dropping out in the first year of study as they lacked motivation and interest in what they were studying. Furthermore, the research conducted by Moeketsi & Mgutshini (2014) found that students had abandoned their studies upon realising that the assumed financial and career pathway they had anticipated was no longer feasible.

2.4.5. Lecturers, curriculum and instruction

The interpersonal relationship between the student and the lecturer is very essential in ensuring success. This relationship hinges on how the lecturer perceives the student and how the student perceives the lecturer. Most lecturers expect the student to adjust immediately to the teaching and learning styles of the university. Understandably, lecturers are also frustrated and complain about their students' reading and writing deficiencies (Chokwe, 2013). Lecturers may view students as being lazy and putting most of their energy in social activities instead.

How students perceive their lecturers is also important as it affects how they view their academic experience. The perception that students have about their lecturers also affects whether they are able to consult with their lecturers. Disparities between student-lecturer ratios impact the relationship and the increased use of technology has decreased face to face contact with the lecturer. The students may perceive lecturers as being distant and unwilling to assist them with their academic difficulties due to these structural barriers (Petersen et al., 2008).

The environment in which teaching occurs is also of importance. Most public universities are characterised by large classes which makes it difficult for the lecturer to identify at-risk students and assist individuals (Siyengo, 2015). Due to the sheer number of the students, the responsibility regarding learning is placed on the students, as they have to find time to consult with the lecturer during consultation times (Petersen et al., 2008). Students may also be intimidated by the size of the class and not feel comfortable to ask questions. What is also worth noting is the language medium of instruction that is used and how this may have an impact on the learning of the students (Civin & Coskun, 2016).

The curriculum is also important for the success of students at the university. “The curriculum is referred to as a detailed plan with identified lessons in an appropriate form and sequence that directs teaching. It specifies the activities, assignments, and assessments to be used in achieving its goals: what the learner will know and do” (Moeller, 2005: 78). It is important that this is communicated to the students earlier on in order for them to have an understanding of what the course requires of them. The lecturer is meant to create an interactive learning experience by knowing how students are reacting to instruction, what they wish to learn more about and what tools are needed to optimize learning (Moeller, 2005). There is an ongoing debate to decolonise the curriculum (Coetzee & Le Roux, 2001). Curriculum and instruction go hand in hand. Instruction is vital in the learning process in order to ensure that the information has been passed efficiently from the lecturer to the students.

2.4.6. Socio-economic factors

Socio-economic factors are referred to as society related economic factors and these factors include employment, education and income (Taylor & Yu, 2009). These factors are related to one another and hence they have an influence on the other. The socio-economic status (SES) represents the availability of important social, educational, and economic resources

that a family has. The SES of the country can affect the student in several ways. It can affect the student on the educational level. In this case, the student may have attended a school that is disadvantaged and lacking in learning and teaching resources. The student may also find it difficult to receive funding from the government as a result of the SES of the country (Taylor & Yu, 2009).

The SES extends down to the students' immediate relationships such as their parents. The level of education of their parents will influence their parent's ability to have a job and which will then affect their income. The ability of their parents to be employed is also directly linked to the country's SES (Taylor & Yu, 2009). According to STATS SA (2018), the unemployment rate in the first quarter of 2018 was 26.7% which is approximately 6 million South Africans. This means there is a significant number of households that are regarded to be at a low SES.

SES is considered to be important in academic success and self-efficacy as students from low-income homes report low levels of self-efficacy. Students from low SES do not only have to be concerned about how they are going to pay their tuition fees and buy textbooks but face much more pressing demands such as meeting their basic needs. These students struggle with money for transport and have to miss classes for such reasons. Students report that they often go hungry due to not having money to buy food (Moodley & Singh, 2015). Dealing with such difficulties can cause a lot of anxiety and stress. Students in such a situation place all of their psychological resources and energy into dealing with these SES factors and are left with very little energy and psychological resources to focus on their studies (Moodley & Singh, 20015).

In the case of students who come from low-income backgrounds, finance is one of the most crucial factors with regards to retention. To assist these students, the South African government introduced the National Student Financial Aid and Scheme (NSFAS), which provides financial assistance for students until they complete their degree. NSFAS is responsible for paying the students' tuition fees, textbook fees and residence fees, and providing an allowance for food (Moodley & Singh, 2015). Financial assistance by the NSFAS comes with criteria that the student has to meet in order to remain funded. The student must ensure good academic standing to remain funded. Research indicates that students on financial aid have higher levels of stress than non-recipients of financial aid (Petersen et al., 2008).

It is also important to point out that these adverse experiences that students are met within the university can foster a sense of resilience in students. Resilience is understood as the positive capacity of the students that permit them to cope with adversity and stress and to bounce back to equilibrium after the disruption (Minulescu, 2015). Their resilience can be in response to external and internal adversities. Such resilience can be fostered by some of the positive factors that exist within themselves, the environment and university structures (Minulescu, 2015).

2.5. Reasons for dropout: Internal factors

The internal factors focus on the immediate systems influencing the student. This study defines the internal factors to include extrinsic factors which are the immediate relationships that the student has. This includes their parents and family and also includes their peers as these relationships facilitate the collective self of the student (Sharma, 2010). The focus will be on these interpersonal relationships as the students adapt to the social environment of the university. The relationship between them and their parents and peers is significant in terms of how they perceive university. Internal factors also include the intrinsic factors which are innate to the individual. These are normally defined as individual traits such as self-motivation, self-discipline and help-seeking skills (Moodley & Singh, 2015).

2.5.1. Academic preparedness: Parental and personal involvement

In this section, academic preparedness is understood as the non-cognitive skills of the student and his or her environment. The focus is placed on parental and personal involvement in academic preparedness. The focus is on the role of the parent and student in academic preparation for postsecondary studies.

One of the Africentric fundamental assumptions that have been made popular by the Nguni proverb “*umuntu ngumuntu ngabantu*” (a person is a person through other persons) puts emphasis on the role that others play in a person’s life (Nwoye, 2017). In the case of academic preparedness, parents play a significant role in creating good habits such as study skills, positive attitudes and academic aspiration. Parental involvement is important in developing their child’s literacy. The parent can assist in the development of reading and writing practices (Dewi & Tlonaen, 2017). Parent involvement has a significantly positive impact on students’ outcomes throughout the elementary, middle school and secondary years. The involvement of the parent can assist the student in being academically prepared for university significantly

(Dewi & Tlonaen, 2017). Additionally, the involvement of parents in their children's education has been noted to have several positive effects such as self-efficacy, academic engagement and intrinsic motivation (Fan & Williams, 2009).

Students are also active participants in their learning and their becoming academically prepared for university. The student must be motivated to become an active participant in the learning process by engaging actively with the curriculum (Brinkworth et al, 2008). The student must use the healthy habits that they acquired from their parents and teachers such as good study skills and a positive attitude towards their school work. These skills will prove useful at university when they have to adopt a more independent style of learning (Brinkworth et al, 2008).

2.5.2. Writing, reading and linguistic skills

Linguistic, reading and writing abilities are other factors that have been raised in the argument that students face difficulties in acquiring, integrating and presenting the information sufficiently at a university standard (Van Dyk, Van de Poel & Van der Slik, 2013). As previously mentioned prior schooling can affect the student's linguistic, reading and writing abilities. When students enter university it becomes their responsibility to improve these skills and failure to do so can have negative consequences to their academic performance. Such difficulties are evident in students who have English as a second language.

At UKZN the required entry marks for English home language students is a level 4 which is 50-59% and for first additional language students, it is a level 5 which is 60-69% at a minimum (Murray, 2014). This indicates the significance and importance of English proficiency as the lectures are taught in English, all the readings are in English, and the student is expected to present the information in English. It is of high importance that students are able to understand and possess the necessary linguistic abilities as this can have a profound impact on their learning.

The student's linguistic abilities are essential in the writing of assignments and tests. The student is expected to be able to use proper grammar and understand the fundamental structures of the language (Van Dyk et al, 2013).

Academic writing is an essential key in ensuring academic success in university. Good writing skills allow the student to express adequately the knowledge that had gained in

assessment, later on in their university it proves to be even more important when writing research theses. This is very much the case as the main assessment tool in universities is in the form of essays (Petersen et al., 2008). A significant number of students struggle to write in an acceptable academic tone. This is due to under-preparedness during their school years. A number of researchers attribute the poor writing skills of students to teachers reluctant to teach writing in the form of compositions. Another reason for poor writing skills is attributed to a lack of creativity in the classroom (Chokwe, 2013). When at university students lack the ability to integrate the information and present it in an academically acceptable standard.

Writing has to be discussed in relation to reading as the two complements each other (Chokwe, 2013). Cabral and Tavares (2002:2) reported that lecturers complain that students do not read analytically, cannot distinguish between important and unimportant ideas, cannot adjust their reading to the different materials they encounter and do not enjoy reading. A large percentage of students entering university are reading at a grade 10 level. First-year AES students have to adapt to reading a multitude of articles and textbooks, most students are unable to cope with the amount of reading that is expected of them (Petersen et al, 2008).

2.5.3. First generation students

Due to the injustices and inequality of the past, most people of colour and women were unable to access or afford higher education. Most of the current students entering university are considered as the first generation of their family to attend university. A first generation or non- traditional university student is defined as a student whose parents or legal guardians have not attended university or completed any form of study at a higher institution (Heymann & Carolissen, 2009). Having a parent who attended university and obtained a university degree carries several benefits for the student, but students whose parents did not attend university or obtain a degree may face several difficulties at a university. The same issues that prevented their parents from entering university or completing their studies may still be still in existence. These factors may stem largely from their background such as low income and stressors from their environment (Siyengo, 2015).

Being a first-generation student can be a predictor for poor academic performance. According to a study by the Pell Institute (2011), first-generation students are at a higher risk of withdrawal from the university, as they reported in the study about 80% of first-generation students do not graduate in 6 years. This is a cause for concern as the prevalence of first-generation students is significantly high In South Africa. According to the Department of

Education (2010), in the United States of America, there are about 30% to 50% of students who are the first generation. The same is true for universities in South Africa. First generation students create a significant number in the university population. First generation students tend to require a significant amount of support from the university to counteract the challenges they are most likely to face (Padgett, Johnson & Pascarella, 2012).

First generation students face challenges such as economic difficulties, insufficient support systems and cultural differences. Generally, first-generation students come from low-income households and are therefore likely to experience difficult situations at a university such as being unable to afford textbooks and tuition fees (Siyengo, 2015). They are likely to have insufficient support. This is due to the fact that their parents are unable to relate to their academic experiences. Another reason may be due to cultural difference issues. First generation students tend to struggle with feelings of belonging and find it difficult to fit in. This is a significant difficulty as fitting in means having to give up aspects of their home culture and identities (Padgett et al., 2012).

2.5.4. Psychological factors

The psychological wellbeing of students is of high importance as it can determine their success at university. It is therefore important that focus is not only placed on the academic preparedness of the students but as well as their psychological preparedness for university (Mapuranga et al., 2015). Students have to possess adequate levels of non-cognitive skills such as persistence, self-efficacy, motivation and study skills. These skills are essential in coping with the new environment and the workload that will be presented to them (Padgett et al., 2012). Ensuring that students do not find themselves in a situation in which they feel highly anxious, stressed or even depressed can make a difference to their academic performance.

As already mentioned in the section on academic preparedness, the involvement of the parent is essential in the academic life of the student. The parent does not only assist in the academic preparedness but also the psychological preparedness. Parents of non-first generation students can be instrumental in the construction of social capital in the students. “Social capital refers to the information, values, norms, standards and expectations for education as communicated to individuals through the interpersonal relationships they share with others” (Padgett et al., 2012, 246). Students who possess high levels of social capital have an

advantage in an environment such as university as they have better networking and interpersonal relationships which are essential to adjusting in university (Siyengo, 2015).

It is important that students have the necessary problem-solving skills in order to be able to deal with the challenges that they are likely to face in university (Padgett et al., 2012). Students also need to have sufficient coping skills in order to be able to mentally deal with stressors presented by university life such as the workload and protests. Students must possess a level of maturity and become self-aware by participating in activities that will help them manage their anxiety and stress levels (Porter & Polikoff, 2012).

Student protests against injustices are not new in post-apartheid South Africa. Protests give the students a platform to express and communicate their challenges and create an awareness of them. These protests are normally led by the Student Representative Council (SRC) members whose job is to communicate the issues of students to the faculty. The SRC is also useful in assisting first-year students to adjust to the university environment. Most recent protests have been against the issue of universities and a lack of funding (Booyesen & Bandama, 2016).

Protests action in the university has become a common phenomenon for students and higher education. However, first-year university students are new to this kind of phenomenon in an academic environment. Protest actions are meant to be peaceful but often lead to violent behaviour which can be very frightening for most students as it possesses a physical threat to their lives and safety (Booyesen & Bandama, 2016). Protests lead to academic interruptions in which the students are unable to attend classes for an extended period of time. The university becomes a hostile area with armed policemen on campus. During actual protests, students can be physically harmed or witness other students being harmed. This can induce stress and anxiety (Godsell & Chikane, 2016).

2.5.5. Social Adjustment

It is not enough merely to look at the structure of the curriculum and the skills required of first-year students. The social aspect also requires acknowledgement. Students need to achieve an effective level of social adjustment to university (Mudhovozi, 2012). If students fail to adjust to their new surroundings and the physical separation from their families it leads to anxiety, feelings of depression and maladaptive behaviours such as poor self-motivation and self-discipline. “This process of adjustment is multidimensional, requiring students to

develop effective coping strategies for adapting to a host of substantial new demands including those found in the academic, social and emotional spheres of development” (Sennett, Finchilescu, Gibson & Strauss, 2003: 107)

Historically, the pedagogies that have persisted at institutions of higher learning in South Africa have been interpreted predominately within a Eurocentric paradigm. As of today the beliefs and culture that are still predominant in university stem from the western world which could be a culture shock for students who are not familiar with the western lifestyle (Sharma, 2010). Students move from their families which is a place of familiarity and comfort to a new environment with strangers. Students have to adjust to this new way of living and this can pose a number of difficulties. Students must become chameleons by adjusting to what is socially acceptable when they are in university and what is socially acceptable when they return home. There is also the need to be accepted by their peers and to become part of the collective, and this can be a stress-inducing process for most (Mudhovozi, 2012). The Africentric paradigm indicates that becoming part of the collective is essential for one’s sense of belonging as there is a need for interconnectedness with one’s environment (Graham, 1999).

The student has to adjust to the academic demands and the university administrative frameworks. According to research by Hagan and McDonald (2000), universities expect first-year students to adjust immediately to different teaching and learning styles. A number of students that come from previously disadvantaged schools lack experience in facilities such as the library and laboratory. For AES students, working in the laboratory plays a vital part in their courses, and students that have previously not had the opportunity to be acclimatised to these learning conditions may be intimidated as they lack the necessary knowledge (Slabbert & Friedrich-Nel, 2015). They are also required to do a lot of reading, this means it is essential for them to be able to use available resources within the library. Students need to develop a new habit of using a facility that was previously not accessible to them (Bojuwoye, 2002).

2.5.6. Non-cognitive skills

The first year of university plays a crucial role in determining whether students will finish their degree on time or if they will become part of the statistics of university drop-outs. The first year of university is filled with different challenges that require students to possess particular skills. Most students are ill-equipped in these skills which places them at a

disadvantage. Scott (2009) highlights that first-year students, particularly AES students, require new skills that will facilitate the transition to higher education and suggests that the students must be able to self-manage and be independent in their learning. This is contradictory to the expectation of most students who are expecting support in terms of their academia which is evident in their past learning experiences (Naong, 2009).

Motivation has been referred to as one ‘of the most important psychological concepts in education’ (Petersen, Louw & Dumont, 2008). The preparedness of students to function in higher education is being investigated continually as it is evident that students lack the essential skills. In Fraser & Killen’s (2003) study, the students who participated in the study expressed difficulty in terms of engaging with the curriculum as a result of poor self-motivation and self-discipline. Such poor skills affected a number of areas related to a student’s engagement and facilitation of their studies. Students’ prior experiences in schooling meant that they relied heavily on their parents and teachers to motivate them to study and to submit an assignment on time (Chokwe, 2013). Students find it difficult to manage their own learning alone. They require intrinsic and external motivation to manage their studies. Students have to possess the ability to motivate themselves and they also acquire motivation from their immediate environment (Petersen et al., 2008).

Self-discipline and self-motivation are reliant on the goals set by the student for him- or herself. Goal commitment is the student’s commitment to completing university which is most influential in determining university persistence (Tinto, 1975). Goal commitment is measured in terms of educational plans, educational expectations or career expectations. The higher the level of planning the more likely it is for the student to remain committed to completing university. Self-motivation and discipline may begin to diminish if the student’s goals that were set are not met or if the student begins to prioritise other activities (Tinto, 1975).

2.5.7. Help-seeking skills

Help-seeking skills are essential in ensuring that the student completes university. Institutions of higher education have facilities that are put into place to assist students with the transition to university and to assist with their academics and psycho-social issues. Universities with a large undergraduate student population, may not necessarily have the capacity to accommodate the vast number of students coming from diverse social, cultural and economically under-resourced backgrounds (CHE 2009, 2010). The university is unable

to track students that require their assistance until it too late in most instances when the student reaches the at-risk status. It is therefore up to the student to seek help in the areas in which they are experiencing difficulties.

South African universities such as UKZN are equipped with Student Support Services (SSS). The purpose of these facilities is to assist students with their academic, psycho-social and economic problems. Their aim is to provide additional academic and moral support for students. Acquiring this kind of support rests largely on the student due to student-lecturer ratios. It has become difficult for a lecturer to identify students immediately that may be struggling in these areas. The academic services focus on student retention on the basis of providing supplementary support in the form of academic advising, tutoring and mentoring, and bridging programmes (Moodley & Singh, 20015). These facilities also provide psychological services in the form of individual therapy in which they receive assistance from a professional for any of their personal difficulties and assistance to adjust to university life (Petersen et al., 2009). Students also receive economic support from these facilities through food parcels or food vouchers, and they also provide the student with information on bursaries (Moodley & Singh, 20015).

Furthermore, these facilities create a student-faculty contact which has been associated with better socialisation at the university as students experience and learn institutional values and requirements through such contact (Petersen et al., 2009). However, most students do not make use of these facilities. Most indicate that they were unaware of the presence of such help on the university campus and those who are aware of their existence may assume that they have to pay for the services, hence refraining from using them. Another reason that most students do not seek help is because of the fear of being stigmatised by fellow students. Students can also feel a sense of helplessness in which they believe that their situation is beyond any kind of help (Moodley & Singh, 2015).

2.6. Summary

The literature review has shown that there are several key factors that play a significant role in the academic experience of first year university students. The factors that were presented are crucial in determining the success of the student at the university. The literature review has presented external factors that are normally associated with the challenges with which students deal due to the systems that are in place in their environment. This chapter has also

provided internal factors that shape how students experience university and their academic performance.

CHAPTER THREE: METHODOLOGY

3.1. Introduction

The aim of this chapter is to discuss the research design and methodology that was used to answer the research questions. This chapter provides the information on the steps that were taken by the researcher in collecting and analysing the data with the aim of answering the research questions. It provides justification for the methods that were used to collect and analyse the data. The purpose of the study was to investigate the factors that influence the academic experiences of AES students and to understand how these factors can affect the success of the students in the university. Hence the following research methods were used to achieve this purpose.

3.2. Research Design

A research design is described as a path that the researcher follows to conduct research (Greasley, 2008). It is a framework that is created in order to answer the research questions. When conducting research, the researcher must provide appropriate information that relates to the research hypothesis (Goliath, 2012). The research was informed by a quantitative research methodology, it utilised the correlation design which explores the relationship between the variables that are being investigated by means of statistical analyses.

3.3. Research Methodology

It was important that the objectives of the study dictated which procedure would best suit the study and also ensure the strength of the argument that the study aimed to make. According to the nature of the study and the evaluation tool that was used, a quantitative research method was best suited for the study. Furthermore, such suitability was motivated by the research questions that were being asked. It was imperative to validate whether the instrument reflected the experiences of first-year university students and to establish the unique experiences of first-year students within a particular faculty as these experiences could influence how the university should conceptualise first-year students. More importantly, this particular research study aimed to acquire meaningful results that would bring one closer to the core of the problem and a quantitative approach was able to achieve this by distinguishing the confounding factors that would normally obscure the main findings (Roberts, Priest & Traynor, 2006). There are a number of variables that had to be taken into

account which a quantitative measure can address while ensuring that the nuisance variables do not affect the results of the study.

In terms of sampling, a non-probability approach was utilized, as the population of the study was convenient to the researcher. The study was conducted at UKZN Pietermaritzburg campus. For this reason, convenience sampling was used as the population of the study was directly available to the researcher. This method of sampling allowed for the population to be stratified into mutually exclusive sub-groups which provided further meaningful data regarding the topic.

These stratified groups were represented as gender and race.

3.3.1. Site

The research study was conducted at the University of KwaZulu-Natal Pietermaritzburg campus. The university has a college of AES, which consisted of the required participants. The participants were located in their lecture theatres and as well as in their tutorial classes.

3.3.2. Population

A research sample of a heterogeneous group of students was used for the study. In terms of demography students of all races participated in the study and both males and females participated in the study. The age of the participants ranged between ages 18-25. In terms of academic standings, all participants had to be currently registered as UKZN students and possess a verified student card. The study focused only on students registered in the college of AES. The research allowed for the participation of students from different social and economic backgrounds.

3.3.3. Participant Selection

The study was conducted in the UKZN Pietermaritzburg campus. Therefore, a non-probability convenience sampling was used as the population of the study was directly available to the researcher. The original aim was to use quota sampling in order to counteract the drawbacks of a convenience sample, but this proved to be difficult as other races were over-represented in most lecture rooms. These stratified groups were represented as gender and race. The demographics of current students that are registered as AES first-year students are black, white, Indian and coloured. The inclusion criterion for participation was that the student had to be registered at UKZN as a first-year AES student.

A total of 125 first year AES students participated in the study. All the participants of the study were registered UKZN students from the Pietermaritzburg campus. A breakdown of participants by race and gender may be seen in Table 1 overleaf.

Table 1: Sample description

	Race groups				Gender	
	African	Coloured	Asian/Indian	Other	Male	Female
N	115	5	3	2	73	52
%	92.0	4.0	2.4	1.6	58.0	42.0

3.4. Instruments

The current study was based on a previous study which involved a series of focus group discussion of first-year students in the College of Humanities at the University of KwaZulu-Natal. The questionnaire that was used in the current study was informed by the experiences of 104 students who participated in the focus group discussion between 2011 and 2012 on two campuses. The development of the survey instruments was conducted in collaboration with the first-year students from a South African university. The data were collected using a questionnaire; in this case, the questionnaire was regarded as a valid and reliable scale to elicit information relevant to the study that can be regarded as valid. A questionnaire allowed for a large group to be tested and it also provided sufficient data for analysis. The questionnaire was semi-structured, containing a majority of closed questions with open-ended questions at the end.

The questionnaire consisted of nine pages in total that the participant had to fill in. Section A consisted of questions about the participant and section B consisted of questions about the kind of home they grew up in. Section C focused on their parents' education levels and section D focused on their experiences in matric. The following eleven sections E-O to focus on other variables that were previously mentioned in chapter 2, such as the financial issues

they have faced since they entered university, English proficiency, psycho-social factors and whether they had received any support from the university.

3.5. Procedure

The data were collected on the premises of UKZN. Ethical clearance was obtained from the Humanities and Social Sciences Research Ethics Committee to conduct the study (Certificate HSS/1276/016M, please see Appendix A) and a Gatekeepers letter was obtained to get permission to collect data on campus (see Appendix B). The researcher obtained verbal permission from the lecturers to collect the data after lectures. There was no deception as to what the study was investigating; the participants were fully informed about the objectives of the study. They were informed of their right to decline to participate or withdraw from the study. The students that chose to participate signed a consent form attached to the questionnaire (see Appendix C). This was done to indicate that the researcher had obtained consent from the participants. An incentive in a form of a meal voucher was used to reward participants for their participation. Participation for the research was on a fully voluntary basis, however, incentives were used to encourage participation and to motivate the participants to complete answering the questionnaire as it was extensive.

The data were collected towards the end of the first semester in 2017. At this point, the study participants were believed to have a concrete understanding of their academic and social experiences. The other reasoning for the collection of data towards the end of the first semester is that according to other research, students drop out after the first semester (Brinkworth et al, 2008). The participants had to fill in a nine-page questionnaire which took between approximately 10-15 minutes to complete (see Appendix D).

The study posed no physical harm to the participant and posed minimal emotional discomfort. For the participants that could have possibly experience emotional discomfort arrangements were made for them to visit a psychologist at the Child and Family Centre (see Appendix E). All participants were treated with respect and care; the same was done with the questionnaire data collected, now stored in a protected facility, to be disposed of in due course in a proper manner. This is done to protect the identity and privacy of the participants.

3.6. Ethical Considerations

Ethical principles emphasize that when researchers conduct their studies they must protect their participants from harm, deception, dangerous procedures and invasion of privacy (Graziano & Raulin, 2010). As mentioned in the above section, the necessary documentation

from the Ethics Committee was obtained in order to conduct the study. The participants were made aware of what the researcher was intending to investigate, hence there was no deception. Consent from the participants was obtained, participants were also informed that they could withdraw from the study at any point and they would still receive the incentive. The data are currently stored in a safe secure area and will later be disposed of in an appropriate manner.

3.7. Research Questions and Hypotheses

The research objective was to investigate the internal and external factors that influence the academic experience of first-year students studying AES. The hypothesis was that internal and external factors have an influence on the academic experience of first-year AES university students. The research questions are:

- What are the external factors that influence the academic experience of first-year students in the College of Agriculture Engineering and Science (AES) at the University of KwaZulu-Natal?
- What are the internal (psychological) factors that are influencing the academic experience of first-year students in the College of Agriculture Engineering and Science (AES) at the University of KwaZulu-Natal?
- What is the relationship between internal (psychological) and external factors that influence the academic experience of targeted first-year university students?

Additionally, this research aimed to validate whether the questionnaire reflected the experiences of the students effectively.

3.8. Data Analysis

The data analysis was conducted through the use of statistical tools available in SPSS. An initial factor analysis was carried out. Factor Analysis is an explorative analysis. It allowed for a wide number of variables to be analysed and grouped to similar variables into dimensions. This process of grouping is also called identifying latent variables. Factor Analysis reduces the information in a model by reducing the dimensions of the observations (Greasly, 2008). This was essential as the questionnaire was extensive with several factors that needed to be grouped together. After this descriptive data about the population were analysed. There were two open-ended questions that the students had to answer, the students

were asked to list any other groups that were not provided on the list that they were part of on campus; however, it was optional to answer. None of the participants answered them, hence, they were not included in that analysed data.

3.9. Internal and External Validity

Validity and reliability are essential components for research in order for the data to be valid, allowing it to be of significance to the study. Validity can be defined as the extent to which an instrument measures what it is supposed to measure and performs as it is designed to perform (Csikszentmihalyi & Larson, 2014). Reliability can be thought of as consistency and accuracy. Validity and reliability were ensured by researching the field extensively by using international and local literature. Another way of ensuring validity and reliability of the study is to remain faithful to the original information collected and to avoid over-interpretation of the data to suit the perspectives of the researchers (Csikszentmihalyi & Larson, 2014).

3.10. Expected Findings

The expected findings from the collected data were that the internal and external factors that influence the academic experience of first-year students can lead to them dropping out of university. Furthermore, the study aimed to indicate an interconnectedness amongst the internal and external variables. It was expected that the findings of the study would indicate that internal and external factors affect the academic experiences of first-year AES students.

3.11. Summary

The research made use of a quantitative research methodology. The participants of the study were students of UKZN from the Pietermaritzburg campus. All the participants were AES students who represented both genders and all the races which were present on the campus at the time of data collection. Convenience sampling was used as the population of the study were directly available to the researcher. A questionnaire was utilized to gather relevant information required to investigate the research questions from 125 participants. The questionnaire was semi-structured containing a majority of closed questions with open-ended questions at the end of each section. The data analysis was conducted through the use of statistical tools available in SPSS.

CHAPTER FOUR: RESULTS

4.1. Introduction

This chapter discusses the findings of the research according to the major themes that were discussed in chapter two and the items that were presented in the questionnaire (Appendix D). The objective of the study was to identify the reasons that cause first-year AES students to drop out or withdraw from the university. Each participant accounted for their background, social economic factors, psychological factors, and so on. The questionnaire attempted to give an overall understanding of the student's academic experience in the duration of their first-year studies. The study explored external and internal factors that influence a student's academic experience. This section presents the emerging significant findings from the sample.

The self-administered questionnaire inquired about the experiences of the students during their first year of study to determine areas of difficulty and success. Through the use of the initial factor analysis, the related factors were clustered together. The analysis provided several focal areas with data worth discussing that will follow the format of the research questions.

4.2. Description of the Sample

A total of 125 first year AES students participated in the study. All the participants of the study were registered UKZN students from the Pietermaritzburg campus. The majority of the participants were African students who made up 92.0% of the sample, coloured with 4.0%, Indian with 2.4% and Other with 1.6%. The sample population distribution in relation to gender was males at 58% and females at 42%. The population sample is not an exact representation of the race groups and gender distribution due to the sampling methodology that was used. However, the statistics can be used as an approximation of distribution. The average age of students that participated in the study was 20 years old. The sample population only made use of first-year AES students.

The following section provides a summary of the results that were obtained from the study, from the above-described population. This section will provide results that were of significance to the study. The presented results were obtained through the use of initial factor analysis. This statistical modality was chosen because of how extensive the questionnaire was. Factor analysis aids in this process by pointing to clusters of variables that are highly

correlated to each other (Robson, 1993). The results will be presented and discussed according to the research questions.

4.3 Presentation of results in terms of the research question concerning the external factors that influence the academic experience of first-year AES students at UKZN

4.3.1. Academic preparedness (Educational system)

Proper education prior to university is one of the crucial factors in determining the likelihood of success that a student would be able to achieve in university. The academic experiences of a student during their year in matric (grade 12) are of high importance as their final results in this grade will determine if they will be accepted into the university of their choice. The first year students who participated in this study were asked a series of questions regarding their academic experiences in matric. The questions focused on the role of their teachers and the resources their schools had. The results that were attained are provided in table 2 and table 3.

Table 2: The influence of teachers in academic preparedness

		Totally untrue	A little true	Quite true	Very true
3. I don't think teachers really like it when we asked questions.	Count	6	22	23	74
	Percent	4.8	17.5	18.3	58.7
4. Teachers often tried to actively involve learners in lessons	Count	4	12	52	57
	Percent	3.2	9.5	41.3	45.2
5. Teachers gave me feedback that helped me do better	Count	6	22	42	55
	Percent	4.8	17.6	33.6	44
6. Teachers did not encourage me to go to the library and read	Count	9	21	30	65
	Percent	7.1	16.7	23.8	51.6
7. Teachers encourage us to think and taught us how to think	Count	8	20	63	8
	Percent	6.3	15.9	50	6.3
Cronbach's Alpha: 0.654					

The above table indicates the obtained results regarding the students' experiences with their matric teachers. The questions focused on the role of the teacher in relation to the students'

academic experience. The presented question in table 2 had a moderate correlation with each other with a Cronbach alpha of 0.654. According to the results obtained, approximately 58.7% of students regarded the statement “I don’t think teachers really like it when we asked questions” to be very true. This could be real or perceived understanding by the student but either way, it would have negative consequences to their studies. The results also indicated that 45.2% of the participants indicated that the statement was very true “Teachers often tried to actively involve learners in lessons”. This can have positive implication as it promotes student engagement. Approximately 51.6% of the participating students agreed strongly with the statement “Teachers did not encourage me to go to the library and read”. This may be as a result of teachers not playing their role as providing extrinsic motivation or that the school did not have such a facility.

Table 3: The role of the school in academic preparedness

		Totally untrue	A little true	Quite true	Very true
14. When learning, I only relied on teachers’ notes.	Count	19	40	28	37
	Percent	15.1	31.7	22.2	29.4
15. My school did not have a library.	Count	28	21	20	56
	Percent	22.2	16.7	15.9	44.4
Chronbach’s Alpha: 0.328					

In response to the statement “When learning, I only relied on teachers’ notes” 29.4% of students responded very true, with a total of 83.3% agreeing in varying degree to only being dependent on the teachers’ notes in matric. This may be as a result of students being highly dependent on their teachers or the school lacking resources such as textbooks. For the statement “My school did not have a library” 44.4% of students responded very true to the statement, with a total of 77.0% agreeing to the statement in varying degrees. This indicates a large percentage of students came from under-resourced schools that did not have a library or had under-resourced libraries.

4.3.2. Lecturers, curriculum and instruction

The relationship between the student and the lecturer is important as it influences the ability of the student to seek assistance. The participants were asked about their perception of their lecturers. This section now focuses on their current experience in university with lecturers and the curriculum.

Table 4: Student perception of lecturers

		Not at all true	A little bit true	Very true	% True
9. Some of my lecturers are unhelpful	Count	56	38	31	
	%	44.8	30.4	24.8	53.2%
10. Some of my lecturers are unfriendly	Count	57	44	24	
	%	45.6	35.2	19.2	54.4%
11. I am afraid of some of my lecturers	Count	45	51	29	
	%	36.0	40.8	23.2	64%
Cronbach's Alpha: 0.729					

According to the results, 53.2% of students responded true to the statement “Some of my lecturers are unhelpful”. This is a significant amount of participants who felt that their lecturers were not helpful. For the statement “Some of my lecturers are unfriendly” 54.4% of the students responded true to this statement. For the statement “I am afraid of some of my lecturers” a significant number of students at 64% responded true to the statement. From the above results, it is clear that a significant number of students did not view their lecturers as being helpful, friendly and indicated that they feel afraid of their lecturers.

4.3.3. Socio-economic factors

Socio-economic factors play a significant role in the success of the student during their study at university. Poor socio-economic standings can affect several areas of the student personal and academic life which could have negative consequences. This section focuses on the kind of socio-economic background of the students and the employment status of the parents.

The pie chart below shows the type of homes that the participants grew up in. The relevance of this information to the study is that it gives an understanding of the socio-economic background.

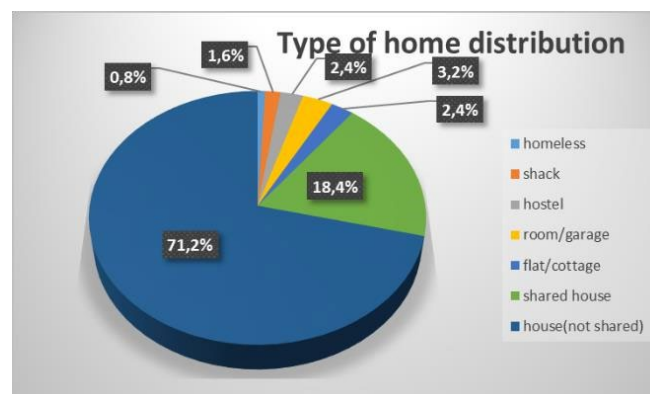
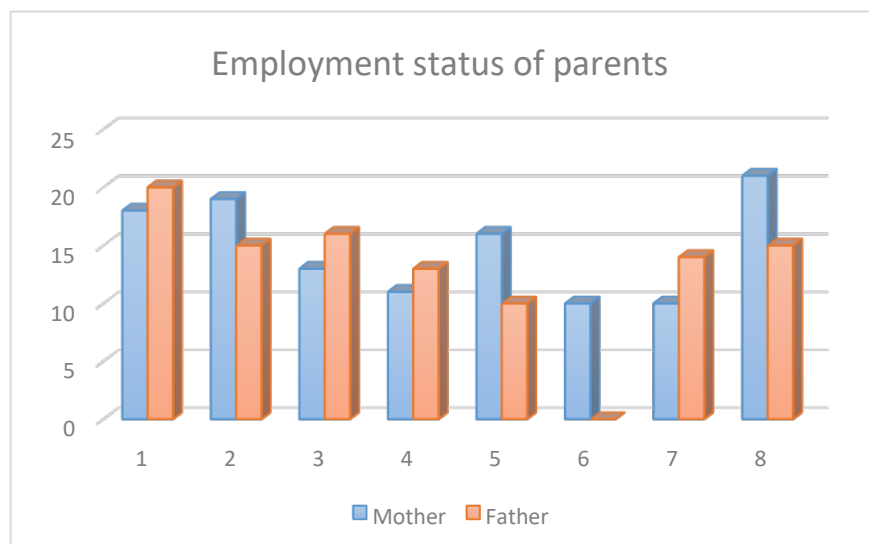


Figure 1: Type of home students grew up in

The pie chart shows the distribution in term of the type of home that the students lived in during their upbringing. According to the results, 71.2 % of students reported that they grew up in a house that they did not share with other relatives or other people and 18.4% of participants indicated that they grew up in a house that they shared with other relatives or other people. The other 10% of types of homes that the students grew up in consisted of flat at 2.4%, room or garage at 3.2%, hostel at 2.4%, a shack at 1.6% and 0.8% indicated that they were homeless at some point of their upbringing.

The graph below indicates the employment status of the participants' parents while the students were growing up. Again this information allows for the understanding of the socio-economic background of the student. Also, the type of employment that the parents held can serve as an influence to the student in terms of career choice and motivation to succeed.



1	Professional/manager	5	Unskilled worker/domestic
2	Senior supervisor/administrator	6	Housewife
3	Clerk/inspector/sales	7	Informal sector employment
4	Artisan/skilled labourer	8	Unemployed

Figure 2: Employment status of parents (%)

According to the results for mothers, 17.8% of participants indicated that their mothers were unemployed during their childhood. The second observation was for category 2 with 16.1% of mothers having a senior supervisor or administrator jobs and the third observation was

noted in category 1 with 15.3% of mothers having professional or managerial jobs. According to the results, 13.6% of mothers were unskilled workers or domestic workers. With respect to fathers, 19.4% of fathers held professional or managerial jobs during the upbringing of the participants. The second observation was noted in category 3, with 15.5% of fathers working as a clerk or inspector or in the sales industry. The third observation was in category 8 with 14.6% of fathers being unemployed.

4.4. Presentation of results in terms of the research question concerning what the internal factors are that influence the academic experience of first-year AES students at UKZN

4.4.1. Academic preparedness (Parental and personal involvement)

This section discusses the obtained data in relation to the involvement of the parent and the self in academic preparedness. In the following table, the participants had to answer questions related to their parents' involvement in their academics during matric.

Table 5: Parental involvement in academic preparedness

		Totally untrue	A little true	Quite true	Very true
1. My parents helped me to understand my school work.	Count	30	34	25	36
	Percent	23.8	27	19.8	28.6
4. My parents helped me to develop good study skills.	Count	18	29	44	34
	Percent	14.3	23	34.9	27
6. My parents rewarded me when I got good marks.	Count	15	32	39	39
	Percent	11.9	25.4	31	31
7. My parents played an important role in my studies.	Count	8	20	38	59
	Percent	6.3	15.9	30.2	46.8
Cronbach's Alpha: 0.72					

The above table indicates the results regarding the role of the parent in relation to the students' education during matric and the support that the parent had in regards to the child's education in matric. According to the data, 28.6% of the students strongly agreed with the statement "My parents helped me to understand my school work", the results indicate a significant number of students who received some assistance to none at all. For the same question, 23.8% of students indicated that there was no parental involvement. The results indicate approximately 46.8% of students strongly agreed with the statement that "My

parents played an important role in my studies”. For this question, 6.3% of students indicated that their parents did not play a role in their studies. Overall the results indicated some level of participation of the parents in their child’s academics. Students ranged from 6.3% to 23.8% indicating no parental involvement in various areas of their academics.

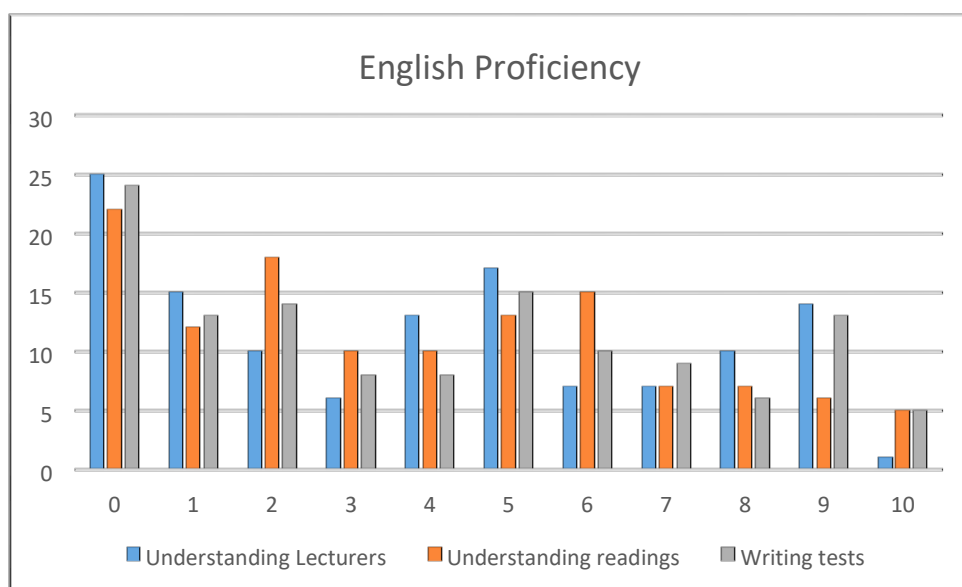
Table 6: Self-involvement in academic preparedness

		Totally untrue	A little true	Quite true	Very true
8. I was scared to put my hand up in class in case I looked foolish.	Count	20	22	42	40
	Percent	15.9	17.5	33.3	31.7
9. I felt uncomfortable about giving my own opinion on tests.	Count	12	9.5	30	48
	Percent		23.8	38.1	27
Cronbach’s Alpha: 0.554					

The above table provides data in relation to the involvement of the students in their own preparation for university. For the statement “I was scared to put my hand up in class in case I looked foolish”, 82.5% of students agreed in varying degrees with this statement. This question was cross-referenced with the statement with regards to student participation in academic learning in university, “I am afraid to ask questions in lectures”, 73.6% of students agreed in varying degrees. In response to the statement “I felt uncomfortable about giving my own opinion in tests”, 88.9% of students agreed in varying degrees to the statement. This indicates limited engagement in class and as well as with the course.

4.4.2. English proficiency – linguistic, writing and reading

English in South Africa is regarded as the main language of instruction and UKZN uses English as the language of instruction. A student’s degree of English proficiency is essential in understanding lecturers during classes, understanding hand-outs and textbook material, and being able to fully communicate their understanding of learned material when writing essays, tests and exams. A student’s level of English proficiency has a direct relationship with his or her ability to perform well academically.



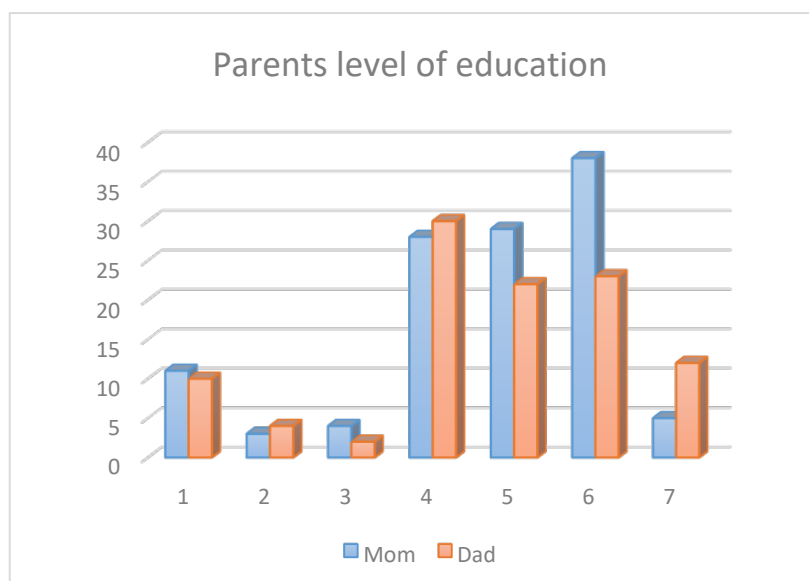
Minimal impact	Moderate impact	High impact
0-3	4-7	8-10

Figure 3: English proficiency of students

The results in the above graph are positively skewed with the majority of the participants indicating no impact to high impact. There is a noted number of peaks within the distribution of the data. In terms of the impact English has on understanding lectures which are indicated by blue, 25 of students who make up 20% of the sample population indicated that there was no impact in them being able to understand lectures. The second significant peak is noted on the scale of 5 which indicates an average amount of impact. In terms of the impact English has on understanding readings and hand-outs which is indicated by orange on the graph, the first significant peak was on the scale of 0 indicating no impact and the second. With regards to the impact of English on writing tests and exams indicated by grey, 24 students indicated that there was no impact on their writing tests and exams.

4.4.3. First generation students

The influence and the role of parents in the academic success of their children is an important factor. Their ability to engage and assist their children with academic work is dependent on their own academic experiences and success. It is for this reason that the research enquired about the level of education that the students' parents possessed. The premise is that if the student has a parent or parents with a higher degree their likelihood of success in university is increased.



1	<Grade 5	5	Some college/tech
2	Grade 5-6	6	University degree
3	Grade 6-7	7	Postgraduate degree
4	Grade 10-11		

Figure 4: Parent's level of education

The total number of participants was 125 but for this particular section a total number of 118 responses were associated with the mother and 103 responses were associated with the father. The missing figures are as a result of the student being raised in a single parent home or not having both parents. According to the results in Figure 4, 9.5% of parents or guardians of the first year students that participated in the study indicated that they had a junior primary education, which is below grade 5. For the category of grades 5-6 there was 3.2% and for grade 6-7 there was 2.7%, indicating that 5.9% of parents of first-year students have only a senior primary education.

There is a noticeable higher elevation for grades 10-11, which indicates that 26.2% of parents have a high school education. The results indicated that 23.1% of parents have some college or Technikon education. Another significant elevation was noted for university degrees with 27.6% of parents having higher education and 7.7% of parents were indicated to have a postgraduate degree. According to the results, 64.7% of students are considered to be first-generation students from this sample.

4.4.4. Socio-economic factors of the student

The table below presents information about the current socio-economic situation of the students.

Table 7: Socio-economic status of students at res.

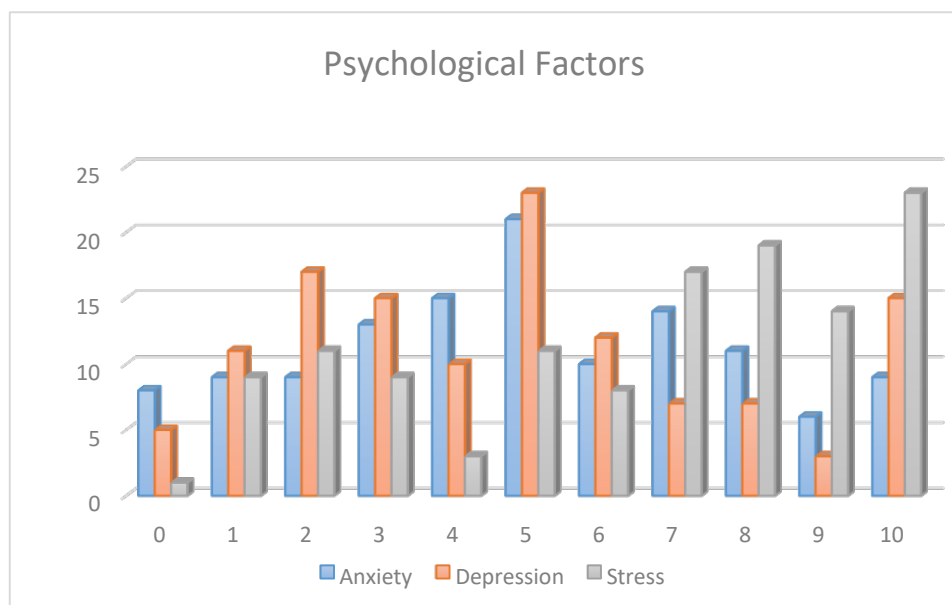
Biographical variable	Category	Frequency	Percentage
12. I have enough money to buy all the books I need.	True	39	31.0
	False	85	67.5
13. I have enough money to pay for my university fees.	True	32	25.4
	False	92	73.0
14. I have experienced hunger because I can't afford food.	True	83	65.9
	False	42	33.3
15. I have had to work to support myself.	True	84	66.7
	False	41	32.5
16. I have not had enough money for transport.	True	88	69.8
	False	37	29.4
17. I have not had enough money to pay for accommodation.	True	76	60.3
	False	49	38.9
18. I have not been able to afford to have a cell phone.	True	95	75.4
	False	30	23.8
19. I have not been able to afford necessary internet access.	True	80	63.5
	False	45	35.7
20. I have had no access to a personal computer.	True	71	56.3
	False	54	42.9

The above table presents results regarding the students' financial status while in university. According to the results, 67.5% of the first year students participating in the study responded 'false' to the statement "I have enough money to buy all the books I need", indicating that they were unable to afford textbooks. Amongst the participants, 65.9% indicated that they had experienced hunger because they could not afford food. With regards to transportation, 69.8% of students reported not being able to afford transportation at times. According to the results

63.5% of students responded 'true' to the statement "I have not been able to afford necessary internet access", which indicates that they have been unable to afford internet access outside of university Wi-Fi. The overall results indicated that most students have struggled financially with respect to being able to afford necessary university resources and to satisfy their own basic needs such as food and accommodation.

4.4.5. Psychological factors

The psychological state of the student is essential for their ability to perform well and meet their academic goals. Anxiety, stress and depression can have a negative impact on the student's ability to concentrate during lectures and while studying for exams. The participants were asked to fill in on a scale from 0 to 10 their level of anxiety, stress and depression that they had experienced during the previous month of study. In terms of scale 0 is regarded as being no distress, 5 as moderate and 10 as severe distress. Anxiety is represented by the blue colour, depression is represented by orange and stress is represented by grey.



Mild	Moderate	Severe
0-3	4-7	8-10

Figure 5: Graph indicating the severity of anxiety, depression and stress.

The above graph illustrates the anxiety, depression and stress levels as indicated by the participants. According to the results represented in the graph, most students indicated that they were experiencing mild form of anxiety. In terms of depression, there is a high elevation in the mild range. In regards to stress, there is a noted high elevation that is observed in category 10, this is an indication of severe stress. This indicates that a significant number of students during the study were experiencing high levels of stress. The noted trend for stress

is indicative of a negatively skewed indicating an increase in terms of students experiencing stress.

4.4.6. Non-cognitive skills

A student's self-motivation and self-discipline are key to ensuring success in university. The ability of students to be able to be fully committed to their academic goals is reliant on their being able to remain motivated and disciplined.

Table 8: Self-motivation and self-discipline of students.

		Not at all true	A little bit true	Very true	% True
6. Talking with my friends about my studies	Count	45	57	23	64%
	Percent	36.0	45.6	18.4	
8. Being able to work under pressure	Count	31	51	43	75.6%
	Percent	24.8	40.8	34.4	
12. Feeling comfortable in the presence of other students	Count	24	47	54	80.8%
	Percent	19.2	37.6	43.2	
18. Being able to set clear study goals for myself	Count	33	43	49	73.6%
	Percent	26.4	34.4	39.2	
Cronbach's Alpha: 0.60					

The students were asked questions related to their academic motivation and discipline. According to the results a significant amount of students at 45.6% responded a little bit true to the statement "Talking with my friends about my studies"; and 36% of students responded not at all true to the statement. In response to the statement "Being able to work under pressure" 40.8% of students indicated it was a little true and 24.8% responded not true at all. In response to the statement "Being able to set clear study goals for myself" 39.2% indicated that the statement was very true. Being able to set clear study goals is associated with academic success.

4.4.7. Social integration and support

Social integration is important to students' social lives as well as for their academics. It is also important that they receive support from family, friends, academic staff as well as other groups within the university. The participants were asked about the groups that they participate in within the university. The graph below presents several groups that are

available at the university and the participants had to indicate if they are a part of these groups.

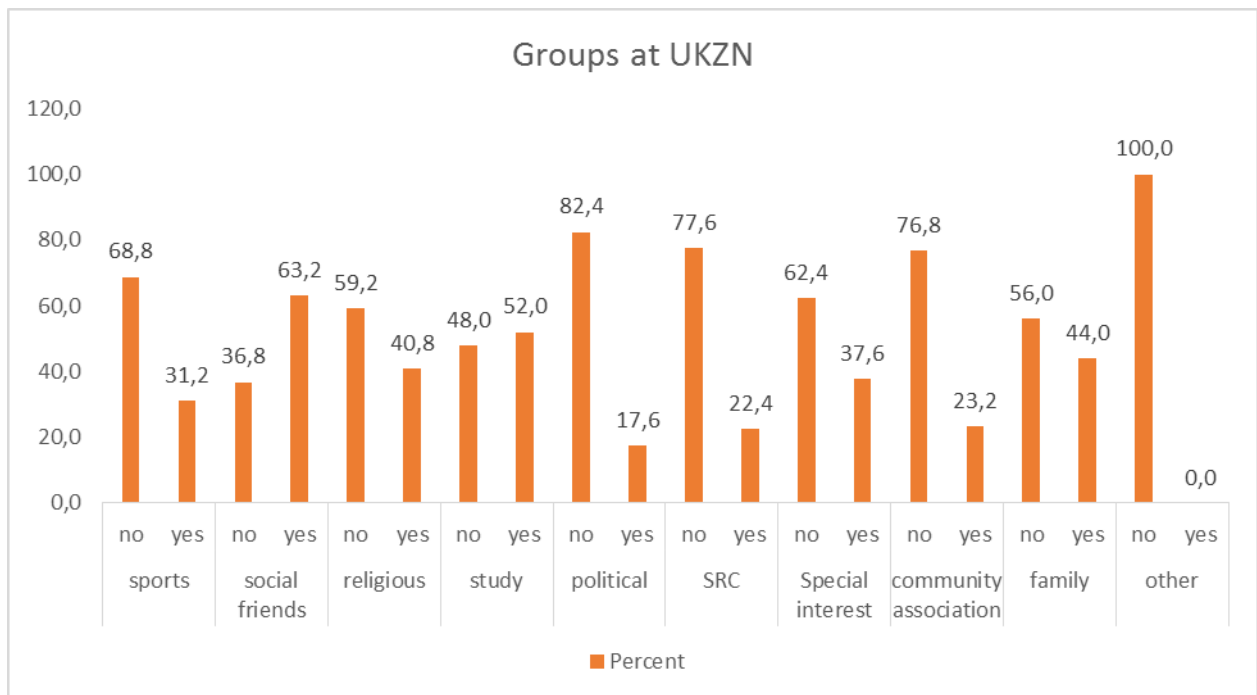


Figure 6: Social groups

The above graph indicates the groups that the participants are part of within the campus environment. A significant number of students at 63.2% indicated that they are a part of a group of social friends in university. The second significant peak was indicated in the study group with 52% of students being part of a study group. The third peak was noted with 44% of students indicating that they are part of a family group (performing rituals, attending ceremonies, or celebrating important occasions).

. A significant number of 82.4% of students indicated that they were not part of any political group on campus. Another significant peak was of 77% of students who indicated that they were not part of the SRC. The third elevation was 76.8% students indicated to not being part of a community association. The participants did not indicate other groups that they were a part of at the campus apart from the ones presented to them.

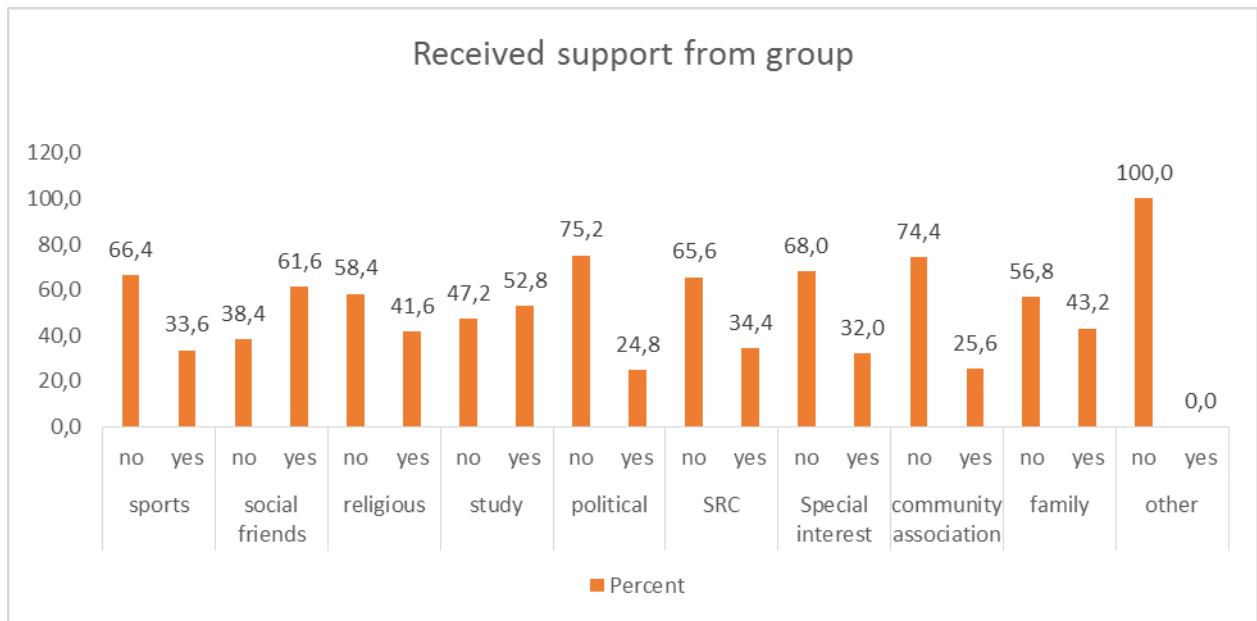


Figure 7: Support received by the student from a group

The above graph presents results concerning the groups from which the students had received support, most of these groups are within the campus. According to the data, 61.65% of students indicated that they had received support from their social group of friends. The second elevation was in the study group, with 52.8% of students indicating that they received help from their study groups. The group that most students indicated that they had not received support from was the political group with 75.2% indicated that they did not receive any help from the group. Approximately 74.4% of students indicated that they had not received help from community associations and 68% indicated they donot receiving help from a special interest group. No other groups were indicated by the participants

4.5. Presentation of results in terms of the research question concerning what the relationship is between personal (internal) and external factors that influence the academic experience of targeted first-year university students.

4.5.1. External and internal factors

This section presents the findings with regards to the relationship between external and internal factors that influence the academic experience of first-year AES students in the university.

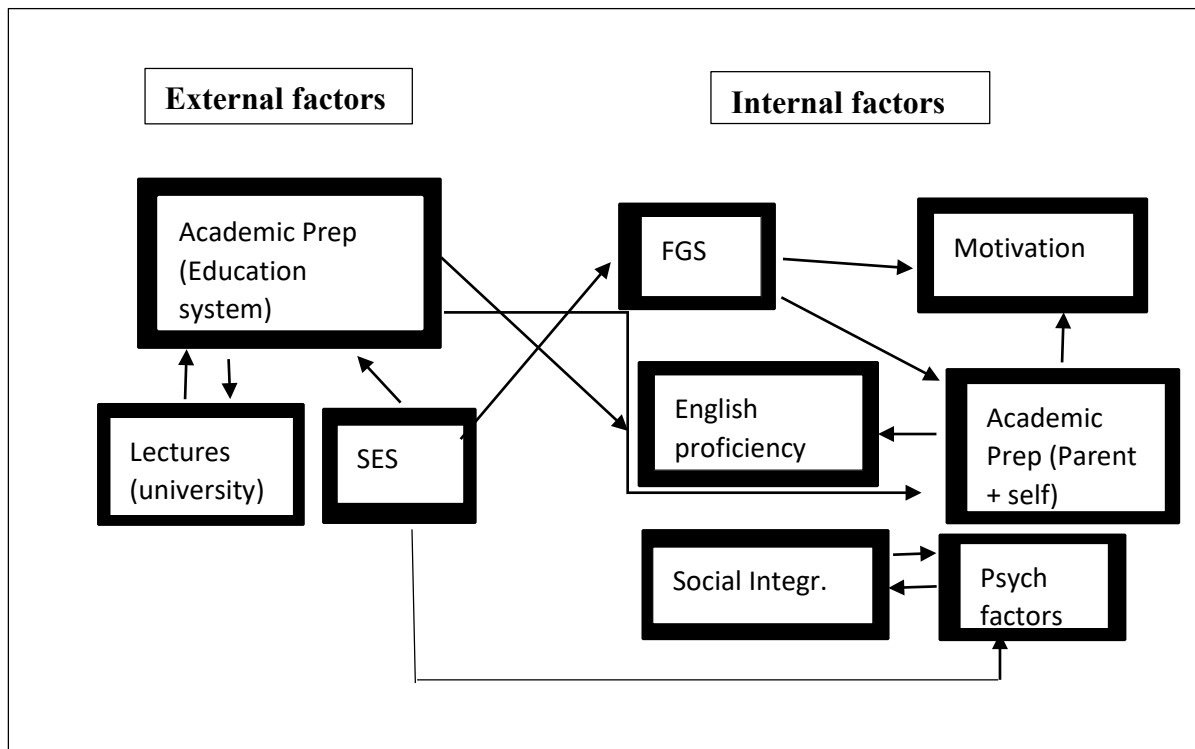


Figure 8: Relationship between external and internal factors

The above diagram presents the external factors and internal factors that were investigated and discussed. The arrow represents a relationship between two factors and its direction represents the influence. The aim of the diagram is to represent the overlapping of the relationship in terms of impact on students between external factors and internal factors. According to the diagram, the academic preparedness in relation to the education system is influenced by the SES of the country and the policies that are implemented by the DHET for secondary education.

In terms of the internal factors, academic preparation with regards to parental involvement is influenced by the level of education that the parent has. This is in relation to first generation students. Motivation is affected by academic preparedness and as well as being considered a first generation student. Motivation is also affected by the SES of the student. Social integration and psychological factors impact on each other. English proficiency also has an influence on the academic preparedness of the student, as it affects their writing and reading abilities.

Most importantly the diagram indicates the relationship between the external and internal factors. Academic preparation with regards to the education system influences the English

proficiency of the student. The SES affects the student's psychological health and can also affect the social integration of the student. The structures within the university can affect the student's academic adjustment and social integration.

4.6. Is the questionnaire a valid tool for reflecting the experiences of the students in their first year of study at the university?

Table 9: Statistical reliability of the questionnaire

Sections	No. of items	Cronbach's alpha	Kaiser-Meyer-Olkin (KMO)
Section I	43	0.939	0.827
Section J	43	0.927	0.777
Section K	16	0.863	0.820
Section L	20	0.934	0.899

The above table represents the reliability statistics of the presented sections. The table presents the Cronbach's alpha which is a measure of internal consistency of that particular section. It is essentially a correlation coefficient and is interpreted as a low correlation if between 0-0.3, moderate if 0.4-0.6, and high or strong if greater than 0.7. It also presents the Kaiser-MeyerOlkin (KMO) which is the measure of how suited the data are for factor analysis. Section I which had 43 items generated an alpha of 0.939 and generated KMO of 0.827. Section J also had 43 items and generated alpha of 0.927 and KMO. The section had 16 items which generated an alpha of 0.863 and KMO of 0.820. Lastly, section L had 20 items and generated an alpha of 0.934 and KMO of 0.899. All of these figures may be taken to indicate that the questionnaire was a reliable tool for reflecting the experiences of the students.

4.7. Summary of results

This chapter has presented the significant results that were obtained from the study. The results indicated that the external factors such as educational preparation, curriculum and socioeconomic status have an impact on the academic experience of the students. Also, the results indicated that the internal factors such as self-discipline and motivation, social adjustment also play an important part in the academic experience of students. A relationship between external and internal factors was evident from the above results. In the following chapter, the significance and implication of these results for the academic experience of students will be discussed.

CHAPTER FIVE: DISCUSSION AND CONCLUSION

5.1. Introduction

This section discusses the outcomes of the study and is interpreted by means of the theoretical paradigm that the study made use of. The Africentric paradigm is able to allow for the results to be discussed in context. The study aimed to identify internal and external factors that influence the experiences of AES students in university during their first year of study. The study noted several factors that play a significant role in influencing the experiences of students in the university. The factors that are discussed in this chapter are all interconnected in one way or another. The results are discussed in relation to the research questions.

5.2. The external factors that influence the academic experience of first-year AES students

This section will discuss the research findings that were obtained by means of the questionnaire from the sample of 125 AES first year university students. These results will be discussed by the means of the Africentric paradigm with a focus on the South African context.

5.2.1. Academic preparedness (Educational system)

A number of studies cite academic preparedness as an indicator of success in university, particularly in the first year of study. This also seems to be a point of view that is held by most academic staff in universities (Mapuranga et al., 2015). In this study, the academic preparedness of students by the educational system was investigated. The DoE, the school and teacher form part of the external factors related to academic preparedness. This section explores the results related to the academic preparedness of the students during their matric year.

According to the results obtained in this study, a significant number of students indicated that their teachers did not appreciate it when they asked questions. This kind of interaction would have an effect on the student's engagement with the curriculum. This can also have an effect on the perception that the student has in terms of the role that they are meant to play in their learning. According to Brinkworth et al. (2008), the pressure that is placed on matric teachers to cover a certain amount of the curriculum in a short period of time and also get more learners to the university may lead to increased assistance. The pressure that the DoE places on teachers to cover the necessary course material on time may affect the ability of teachers to encourage students to ask questions as this could be time-consuming. This kind of behaviour can have a negative impact on academic preparedness.

However, on the other hand, these results also indicated that teachers did make an effort to promote a culture in their students of being pro-active in their education. This is important because it prepares them for the university, in which students need to be fully in charge and independent in their own learning (Du Plessis & Gerber, 2012). According to the results, a significant number of students indicated that their teachers tried to involve them actively in lessons and also encouraged them to think for themselves. This kind of behaviour encourages student engagement and emphasizes the role of students in their own learning. This kind of preparation will have a positive effect on the student's transition to university and participation in lectures and will foster a good student-lecturer relationship (Chokwe, 2013).

From the responses of the students, it was seen that a significant number of them indicated that their school did not have a library, or in other cases, the library was under-resourced and not fully functional. A student who is not exposed to such a facility becomes underprepared for the university in several areas. These students have not developed a culture of reading which is a skill that is particularly important in being successful in university. It is important that students have obtained the content knowledge and skills for reading and mathematics in order to be ready for university academically (Du Plessis, 2012).

Students in the AES College are required to conduct several research exercises in the first year of study at university. Students who were not exposed to a library lack research skills and find it difficult to locate the books they require (Sondlo, 2013). Since the library is also an environment they are not used to, they may feel uncomfortable using it. From this kind of results, it can also be assumed that approximately the same number of students did not have access to a laboratory in their schools. Gaining skills and being comfortable in a laboratory is important for AES students. This also creates an inferiority complex in which the students feel inferior to students that are already accustomed to this environment.

5.2.2. Lecturers, curriculum and instruction

Lecturers play an important role in the academic experience of first-year students. They tend to set the tone for what the students can expect for the duration of their study at university. The results indicated that most students felt uncomfortable sharing their opinions in lectures and preferred to agree with the lecturer. This kind of behaviour can be linked to that of their prior learning in which they felt teachers did not appreciate them asking questions. This has an impact on student engagement which can affect the productivity of the student. The

lecturer-student relationship is important for the success of the student. The results also indicated that students felt that their lecturers were not approachable. This kind of thinking also informs what students believe are the objectives of the lectures.

The curriculum and instruction are also important for the success of the student. The curriculum focuses on the structure of the course. At UKZN there has been a shift with integrating technology into learning. Lecture notes and readings are uploaded on to the learning site, and assignments have to be typed and uploaded for submission. This shift was made to accommodate the growing population of students. However, it may prove challenging to some students. A significant number of students indicated that they did not have access to a personal computer or access to WiFi outside of the campus. These students have to rely on campus computer laboratories that tend to be overcrowded, with students having to wait a significant amount of time to access a computer (Sondlo, 2013).

Instruction is also an important factor in the ability of students to be successful in their studies. This is the ability of the lecturers to communicate what is required for the student to be successful in a particular course. If students do not understand what is required of them in a particular assignment then it will be difficult for them to pass the assignment. Students indicated that they do not know what their lecturers require from them.

5.2.3. Socio-economic factors

South Africa is a third world developing country in which service delivery and social justice remain important issues. Socio-economic circumstances are associated with poor academic experience and low literacy. According to the results that were discussed in the previous section most students indicated that there was no library at their school or the library was under-resourced at their school. A majority of disadvantaged schools in South Africa suffer from such a lack of resources which also includes textbooks, computers and laboratories (Du Plessis & Gerber, 2012).

The social state of South Africa has a major impact on the preparation of students. There is an increase in violence in most South African communities and this violence infiltrates systems such as the school and university. In schools, there has been a noted teacher on student and student on student violence. This can create a negative association, with the student experiencing school as a violent, anxiety-provoking environment. In terms of

university, there is an increasing incidence of sexual assault against female students, and again this creates a hostile environment for students that can lead to anxiety and stress.

The economic status of the student's family has implications on the student's academic and psycho-social experience. According to the results, students reported a cumulative value of 32.4% unemployment status in their parents. This can affect their ability to provide necessary resources for their children. The parents may struggle to provide school materials for their children and to provide the necessary financial support for the student while at university (Taylor & Yu, 2009). Students who come from a low-income family might also find it difficult to integrate themselves in the social scene of the university as they may feel inferior to their peers or lack funds to participate in social events. The Africentric paradigm indicates that becoming part of the collective is essential for one's sense of belonging as there is a need for interconnectedness with their environment (Graham, 1999).

However, the family SES can also be a source of motivation for the student to do well at university. Such adversities can foster resilience within the student, as being in university provides an opportunity for them to escape poverty and improve. Furthermore, DHET has structures in place to assist students that require funds through NSFAS. Universities also provide assistance by giving food parcels or vouchers (Moodley & Singh, 2015).

5.3. The internal factors that influence the academic experience of first-year AES students

5.3.1. Academic preparedness (parental and personal involvement)

This section of the study focused on the academic preparedness of the student in relation to the involvement of their parent and themselves in the learning process. According to the results that were obtained with regards to parental involvement, most students received some form of support from their parents. This support was with respect to support with academic material, developing good study skills and rewarding students when they obtained good marks. According to the Africentric paradigm, the interpersonal relationship between a parent and child is of significant importance as the parent is able to instil important values in their child (Sharma, 2010). These are important values and skills that the student requires at the university. The level of parental involvement is also dependent on the level of education of the parent.

The student also has a role to play in becoming academically prepared for university. According to the results of this study, a significant number of participants indicated that they were scared to put their hand up in class and they felt uncomfortable giving their own opinion. This indicates limited participation by students during class. The poor levels of engagement with the curriculum can have negative effects on academic preparedness (Ahlfeldt, Mehta & Sellnow, 2005). This observed behaviour can also be as a result of a poor self-concept and confidence which can be linked back to the psychological factors (Porter & Polikoff, 2012). The observed behaviour of the participants may be as a result of their teachers not encouraging them to ask questions, which was discussed in a previous section. Furthermore, what needs to be noted is that if there is poor student engagement at secondary level it is highly possible that this will also be the case in university (Dewi & Tlonaen, 2017).

5.3.2. English proficiency- linguistic, writing and reading

English proficiency is an important part of the students' academic experience. This is due to the fact that most South African universities including UKZN use English as a medium of instruction. Typically, students who are English second language come from disadvantaged schools and struggle in relation to linguistics, writing and reading (Siyengo, 2015). These are important components with regards to learning. This study investigated the ability of students to understand lectures and readings and to write tests and exams. One must keep in mind that the responses were only from students, as academic staff may hold different opinions.

Students frequently indicated that "Poor accent affects my understanding during lectures" (see appendix D, section K). This shows that a large number of students experience some form of difficulty in understanding lectures. This may be due to their level of English proficiency or the accent of the lecturer in the case of a foreign African national, as most students are accustomed to being taught by a member of their own race (Civin & Coskun, 2016).

There were some students who indicated some form of negative impact with regards to understanding readings and handouts. This can be attributed to most schools not having libraries and teachers not encouraging their students to read, as already discussed in academic preparedness. Again, this may not be a significant issue to a majority of students from the sample population.

5.3.3. First generation students

According to empirical evidence, being a first-generation students have several disadvantages that are predictors for difficulty in the academic experience of first-year students (Padgett et al., 2012). As already mentioned in the section regarding academic preparedness, the role of the parent is essential for the student's success in university. The level of education of the parents has a great effect on the student's perception of education and preparation for university. Such empirical evidence suggests that students who have highly educated parents have significant advantages with regards to cognitive and psychosocial development compared to students with parents that did not attend university or complete a degree (Padgett et al., 2012).

The results obtained from this study indicated that 64.7 % of students were regarded as being first-generation students. These findings are in line with other empirical research that indicates that a majority of current first-year students are first-generation students (Padgett et al, 2012). These results mean that a significant number of parents have low levels of academic experience which can affect their ability to assist their children in becoming academically prepared for university. These parents might find it difficult to prepare their children for the university in terms of developing healthy study skills. Their involvement in their children's academic life might be limited due to the fact that they may not be able to provide assistance with homework and projects (Siyengo, 2015).

Parents that did not attend university maybe also be unable to prepare their children for university emotionally by sharing valuable personal experiences about the university which can assist their children with adjusting to university (Merritt & Buboltz, 2015). This can also affect their ability to understand the difficulties that they are faced with in university. However, this does not mean that s parents are unable to be a source of support for their children. The parent still remains an important interpersonal relation, the parent can still motivate students to do their academic work.

Students that are the first generation usually come from disadvantaged backgrounds due to their parents having low levels of education (Padgett et al., 2012). This evidence was supported in the current research which indicated that the majority of parents were unemployed or were domestic workers. These students tend to struggle financially. Furthermore, since these students come from low-income families they may experience culture shock as they move to a middle class, predominantly white environment. According

to the Africentric perspective, the individual identity and culture is important to the student and giving it up to fit in may cause internal psychological difficulties (Sharma, 2010).

5.3.4. Socio-economic factors (Students' SES)

This section focused on the SES of the students while they were in university. The study investigated the living conditions of these first-year students while studying in university and residing at the student res. When students are in university they acquire a certain level of responsibility and maturity. In this case, most students have to be in charge of their finances while studying. A significant number of students indicated that they did not have money to buy textbooks and also indicated that they do not have access to a personal computer. Textbooks are an important learning tool as they possess all the required information for that course, and most students have to rely on printing the book chapter by chapter. According to Sondlo (2013), being able to possess a personal computer or having easy access to a computer is important for academic success as most university courses are internet-based.

Students also indicated not having enough money for transport. For students who reside at home or in private accommodation, transport can become a challenge. In many cases, the student is unable to come to campus and has to miss several classes. A significant number of students also indicated that at some point they could not afford food and had to go hungry. This creates a stressful environment for the student in which their finances can pose serious threats to their ability to remain on campus. Some students resort to acquiring a job in order to support themselves, as was suggested by the data. This indicates the students' maturity and ability to problem solve. However, it is important that students are able to multitask and manage the demands of their coursework as well as their jobs.

5.3.5. Psychological factors

This study examined the psychological wellbeing of students as an important factor in their academic experience. Resilience is an important component for the student to possess. Students are likely to be met with negative experiences such as the ones mentioned in the above section, and it is therefore important that students recover quickly from such experiences and remain positive (Mapuranga et al., 2015). This study examined the anxiety, stress and depression levels of students. The students who indicated moderate levels of anxiety were at an advantage as healthy levels of anxiety improve learning by acting as a motivation to study. However, the students who indicated high levels of anxiety were at a

disadvantage as excessive anxiety can distract the students and interfere with their attention to tasks.

With respect to stress, the graph was asymmetrical and negatively skewed. As the level of stress increased so did the number of students. Stress has a similar effect to anxiety, at low levels stress is considered to be healthy and to act as motivation. However, in high levels, stress can affect the students' concentration levels and disrupt the retrieval of memory. The levels of depression had a similar pattern to those of anxiety. Depression has a negative effect on learning as it is associated with helplessness, hopelessness, withdrawal from social activities and low energy levels. Students may feel hopeless about their situation and be less motivated to study. They become withdrawn by not attending classes which would have a significant impact on their studies (Mapuranga et al., 2015).

5.3.6. Self-motivation and Self-discipline

Self-motivation and self-discipline are important in academic success. The student needs to be motivated to attend lectures regularly, study and set realistic goals. Self-motivation and self-discipline are about students taking the initiative in their own lives and academics by not being solely reliant on the motivation they receive from family and friends. These are important skills to have, particularly if they are living in a student residence away from home (Naong, 2009).

According to the results, a majority of students agreed that they are able to work under pressure. It is important that the student is able to work under pressure as the AES faculty generally has a high load of academic work. Students have to be able to allocate their time to all their courses and meet all the deadlines for their assignments. A significant number of students indicated that they have set clear study goals. It is important for the student to set realistic studying goals as this allows for the student to prepare in advance. This means that they also have steps they take to achieve such goals. Meeting these goals will keep students motivated and on track with their studies.

Self-motivation and self-discipline are also influenced by the company that the students keep. Having a group of friends or a support group that is highly motivated and disciplined can have positive effects on the student. A significant number of students indicated that they talk to their friends about their studies. Sharing academic experiences with friends can help the student view another perspective or communicate their own difficulties which may result in

their receiving the help that they require. Therefore it is important that the student is part of the social groups on campus.

5.3.7. Social integration and support

Social integration is an important factor. It is important particularly for students who move away from home to be properly integrated into their new environment. If students fail to adjust to their new surroundings and the physical separation from their families it can lead to anxiety, feelings of depression and maladaptive behaviours such as poor self-motivation and self-discipline (Bojuwoye, 2002). How the student perceives the environment is important if the students perceive the university to be threatening this can lead to anxiety and feelings of apprehension. In order for the student to be properly integrated there needs to gain support and they need to partake in social activities that will allow them to cultivate interpersonal relationships (Petersen et al, 2008).

This study looked at the groups that are present in UKZN that also act as a means of support for students, and how many students participated in these social groups. A significant number of students indicated that they are a part of a group of social friends in university. This is an important group as they are much closer to the individual and have the greatest influence on the student. The second significant peak was indicated in the study group with a significant number of students being part of a study group. A study group is also important as it keeps students motivated in their studies. The third peak was noted with 44% of students indicating that they are part of a family group (performing rituals, attending ceremonies, or celebrating important occasions). Maintaining family bonds and closeness is important for the psychological wellbeing of the student (Sharma, 2010).

The study also enquired whether students had received any form of help from any of these groups. This is the likely group to provide some form of assistance as they are closer to the student. It was noted that 52.8% of students indicated that they received help from their study groups. A study group can provide academic assistance which is important for academic success.

5.4. The relationship between personal (internal) and external factors that influenced the academic experience of targeted first-year university students.

Figure 8 is a representation of the noted relationships amongst all the presented factors. The diagram presents the external factors and the internal factors and also shows the relationships between them. In understanding the academic experience of a first-year student and the possible factors that may lead a student to withdraw from the university, there is a need to understand that there is no one single factor which is a cause and it should rather be viewed as a system, with each factor influencing the next factor.

As already discussed, academic preparation is regarded as the starting point of the issue at hand as it can result in failure or success. If a student receives a poor quality education and therefore a lack of preparation for university, the student may have a poor English proficiency. Poor

English proficiency affects the student's ability to communicate with his or her lecturer, and it affects reading and writing abilities which are key to academic success. This can then affect the student's confidence in his or her ability to perform, which in turn could affect motivation to meet academic goals. If students struggle to meet their academic goals it can have a negative impact on their psychological wellbeing.

The SES of the country affects the education system and the schools that are reliant on government. Lack of resources such as learning and teaching materials affects the preparation of the student. SES can also have an effect on the family, particularly of first-generation students which eventually has an impact on the student's personal financial state in university.

The system not only promotes conditions that are negative or oppressive to the student, but it also promotes positive conditions. The policies that the university employs, particularly in relation to Student Support Services (SSS), have a positive impact on several areas of student life. Such services provide academic assistance by assisting students to choose the curriculum best suited for them. They provide students with services in relation to mental wellbeing by providing necessary counselling and psychotherapy. Furthermore, SSS also assists students who are a struggle financially with food vouchers and information regarding bursaries. This kind of assistance has a positive impact on the students and ultimately on their studies if the students make good use of the services.

5.5. Concluding remarks

In this chapter, several factors that influence the academic experiences of students have been discussed. This chapter highlighted how these factors can shape the student's experience of university and also influence whether students are successful or not in their first year of studies. The findings of this study indicated that AES students had both negative and positive experiences in university. From the above discussion, it can be concluded that academic preparation both from the educational system (external) and parental and personal involvement (internal) is important for academic success in university. It is important that the student is academically and emotionally prepared for the university as this sets the foundation that is needed for academic study. This means that the student is likely to have a good experience at a university with the lecturers and the curriculum.

In South Africa, most students entering university are considered first-generation students. This has an impact on their academic preparedness and as well as their SES. The SES of a student plays a major role in their academic experience at university and this is demonstrated by yearly strikes such as "fees must fall". Students with a low SES have to deal not only with the academic demands of their curriculum but also have to deal with the daily struggle of meeting their basic needs. From this study, it was evident that a lot of students experience stress and this again is as a result of academic demands, SES and possibly other factors that were not explored.

Being English second-language students can also affect their academic experience, as this has an impact on their ability to engage during the lecture. It also affects their ability to understand lecturers, reading, and writing of assignments. The effect that these issues would have on the student is mediated by their resilience and problem-solving ability, which is demonstrated by their self-motivation and self-discipline when it comes to their academics, and, furthermore, by the ability of the student to seek assistance from the structures within the university.

5.6. Further research possibilities

The way forward would be to survey or interview students that have actually dropped out from the university during their first year of study. Such research would provide specific reasons as to why they drop out of the university. It would also allow an understanding of the thought processes that occur before a student decides to drop out. Furthermore, it allows the university to evaluate and improve retention programmes.

The results of this study must be interpreted within its limitations. This study focused on first-year students in the college of AES only at the University of KwaZulu-Natal. Hence, the findings are not generalised to other faculties and institutions of learning. A non-probability sampling method was used, which may result in the underrepresentation of other races as the majority of participants were black. These experiences may not be shared in other ethnically diverse groups.

5.7. Recommendations

5.7.1. Curriculum policies

There needs to be further improvement in the school curriculum to be able to bridge the gap between high school and university. This would mean that students would be better academically prepared for university. In terms of career guidance, the DoE needs to allocate psychologists to schools to conduct career assessments. Furthermore, the subject Life Orientation (LO) also has a lot of potentials and can be used for the purpose of career guidance. LO teachers can attend workshops for basic career guidance in order to assist their students in making wise career decisions. Students also need to be aware of other options with regards to university courses such as the extended programmes for Mathematics and Science.

5.7.2. Universities

During orientation week the university must make it their priority to be aware of first-generation students by distributing questionnaires to the first year students. Those who are found to be the first generation can be allocated to support structures that can assist them with their needs.

These support structures can be lecturers, tutors and mentors. Such questionnaires can also be used to identify students who come from disadvantaged schools, these students are likely to be English second-language learners and also lack computer skills. Therefore these students can receive assistance from tutors and mentors with workshops for essay writing and basic computer skills at the beginning of the academic year.

5.7.3. Students and their families

Students need to have a sense of agency and understand that they are responsible for their own education, hence take it upon themselves to consult lecturers, tutors and mentors to receive academic support. Students should also take it upon themselves to take part in academic workshops and to use the services provided by the SSS. It is important for students

to seek help actively by using the support structures in university. Students should also make use of the social groups in UKZN to assist them with social adjustment to university. Parents and family members need to be actively involved in the student's academics by providing emotional support and by other means available to them. Parents play a key role in their children's academic experience and therefore they should foster good study skills and a positive attitude with respect to education. Parents should also play their role in motivating the students.

5.8. Concluding reflections

The significance of this study was that it presented both the external and internal factors that influence academic experience in university. The study was able to demonstrate the influence and impact that these factors had on the academic experience of the student. Furthermore, the study was able to highlight the existing relationship between external and internal factors and how they affect not only each other but also the academic experience of the student. From the study, the importance of both cognitive and non-cognitive skills was evident. Most importantly it was evident from the study that the involvement of multiple stakeholders such as the DoE, parents and teachers are essential components in the academic experience and success of first-year AES students.

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APPENDIX A



30 August 2016

Ms NN Biyela 212525346
School of Applied Human Sciences
Pietermaritzburg Campus

Dear Ms Biyela

Protocol reference number: HSS/1276/016M

Project Title: Understanding academic experience of South African first year students studying Agriculture, Engineering and Science (AES) in University using Africentric paradigm

Full Approval – Expedited Application

In response to your application received 15 August 2016, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

.....
Dr Shenuka Singh (Chair)
Humanities & Social Sciences Research Ethics Committee

/pm

Cc Supervisor: Nontobeko Buthelezi
Cc Academic Leader Research: Professor D Wassenaar
Cc School Administrator: Ms Nondumiso Khanyile

Humanities & Social Sciences Research Ethics Committee

Dr Shenuka Singh (Chair)

Westville Campus, Govan Mbeki Building

Postal Address: Private Bag X54001, Durban 4000

Telephone: +27 (0) 31 260 3587/8350/4557 Facsimile: +27 (0) 31 260 4609 Email: ximbap@ukzn.ac.za / snymanm@ukzn.ac.za / mohunp@ukzn.ac.za

Website: www.ukzn.ac.za



1910 - 2010
100 YEARS OF ACADEMIC EXCELLENCE

Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

Appendix B



23 June 2016

Ms Nonhlonipho N. Biyela (SN 212525346)
School of Applied Human Sciences
College of Humanities
Pietermaritzburg Campus
UKZN
Email: niphobiyela@gmail.com

Dear Ms Biyela

RE: PERMISSION TO CONDUCT RESEARCH

Gatekeeper's permission is hereby granted for you to conduct research at the University of KwaZulu-Natal (UKZN), towards your postgraduate studies, provided Ethical clearance has been obtained. We note the title of your research project is:

"Understanding academic experience of South African first-year students studying Agriculture, Engineering and Science (AES) in University using the Africentric paradigm".

It is noted that you will be constituting your sample by handing out questionnaires to first year students from the College of Agriculture, Engineering and Science on the Pietermaritzburg campus.

Please ensure that the following appears on your questionnaire/attached to your notice:

- Ethical clearance number;
- Research title and details of the research, the researcher and the supervisor;
- Consent form is attached to the notice/questionnaire and to be signed by user before he/she fills in questionnaire;
- gatekeepers approval by the Registrar.

Data collected must be treated with due confidentiality and anonymity.

Yours sincerely

MR SS MOKOENA
REGISTRAR

Office of the Registrar

Postal Address: Private Bag X54001, Durban, South Africa

Telephone: +27 (0) 31 260 8005/2206 Facsimile: +27 (0) 31 260 7824/2204 Email: registrar@ukzn.ac.za

Website: www.ukzn.ac.za



100 YEARS OF ACADEMIC EXCELLENCE

Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

APPENDIX C

UKZN HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE (HSSREC)

Information Sheet and Consent to Participate in Research

Date: 08-12 May 2017

Dear prospective participant

My name is Nonhlonipho Nontshumayelo Biyela, a Master of Social Sciences (Counselling Psychology) student from the School of Applied Human Sciences of the University of KwaZulu-Natal, Pietermaritzburg Campus, and can be contacted at 084 523 5877 or niphobiyela@gmail.com.

You are being invited to consider participating in a study that involves research on “Understanding academic experience of South African first-year students studying Agriculture, Engineering and Science (AES) in University using Africentric paradigm”. The purpose of the study is to explore this topic by creating a form of understanding when it comes to the academic performance of first-year AES students. It will explore both personal (internal) and external factors that affect academic performance in the first year of the university with particular focus to AES students.

The study is expected to enrol a total number of one hundred and twenty (120) undergraduate first-year students’ participants: drawn from the faculty of Agriculture, Engineering and Science. This sample include both females and males; it will also include all races currently present in the institution, black, white, coloured, Indian and other. A questionnaire that will take approximately 30 minutes to complete will be used to collect data.

There will be no direct benefits and harm that would result from participating in this study. However, this study the study will afford us the opportunity to understand the actors that affect the first-year academic performance of AES students. The researcher will disclose in full any appropriate information to participants.

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (approval number- HSS/1276/016M).

In the unlikely event of any problems or concerns/questions arising from your participation in this study, you may contact the researcher at 084 523 5877 or niphobiyela@gmail.com. The supervisor of the research study Ms. Nontobeko Buthelezi can be contacted 033 260 5670 or buthelezin@ukzn.ac.za or the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

Tel: 27 31 2604557- Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

Participation in this research is voluntary and participants may withdraw participation at anytime, should they wish to do so, and in the event of refusal/withdrawal of participation, the participants will not incur penalty or loss of treatment or another benefit to which they are normally entitled to.

The steps that will be taken to protect the confidentiality of personal/clinical information are as follows:

- Only the researcher and her supervisor will have access to the raw data collected from the participants.
- Data collected will be kept in a locked cabinet with access restricted to the researcher and her supervisor.
- In the case of electronic data, a password will be used.
- The research data and research materials will be kept by the supervisor for a period of five years.
- The questionnaires and all confidential data will be shredded after five years.
- If you would like feedback on the findings of the study, a copy will be made available at the University KwaZulu-Natal Library, Pietermaritzburg.

CONSENT

I have been informed about the study titled **“Understanding academic experience of South African first-year students studying Agriculture, Engineering and Science (AES) in University using Africentric paradigm”** by the researcher, Nonhlonipho Biyela.

I understand the purpose and procedures of the study.

I have been given an opportunity to answer questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any of the benefits that I usually am entitled to.

If I have any further questions/concerns or queries related to the study I understand that I may contact the researcher at 084 523 5877 or niphobiye@gmail.com and the supervisor at 033 260 5670 or buthelazin@ukzn.ac.za; as well as the HSSREC.

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

Tel: 27 31 2604557 - Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

Additional consent, where applicable

I hereby provide consent to:

Please tick the relevant box

Yes	No
-----	----

Signature of Participant

Date

APPENDIX D

I have read the study information and consent to participate in the research

Signature _____ Date: _____

A. Please answer the following questions about yourself			Office Use only
1.	Your student number	_____	Astudno 2125 _____
2.	Your age	_____ years	Age _____
3.	The name of the school where you matriculated (please print)	_____ _____	Aschool ←
4.	Your race	Asian/Indian <input type="checkbox"/> Black African <input type="checkbox"/> White <input type="checkbox"/> Coloured <input type="checkbox"/> Other <input type="checkbox"/>	Arace 1 2 3 4 5
5.	Your gender	Male <input type="checkbox"/> Female <input type="checkbox"/>	Asex 1 2
6.	Who raised you?	Both parents <input type="checkbox"/> Mother only <input type="checkbox"/> Father only <input type="checkbox"/> Other <input type="checkbox"/>	Araised 1 2 3 4
7.	How many brothers and sisters do you have?	_____	Asibs _____

(Please turn over for Section B)

**B. Please answer the following questions about the home you grew up in
(for each question put a X in as many blocks as apply)**

8	What type of home did you grow up in (tick 1)?	We were homeless <input type="checkbox"/> Shack <input type="checkbox"/> Hostel <input type="checkbox"/> Room/garage <input type="checkbox"/>	Flat/cottage <input type="checkbox"/> Shared house <input type="checkbox"/> House (not shared) <input type="checkbox"/>
9.	Which of the following things did your family own (tick all that apply)?	Car <input type="checkbox"/> Fridge <input type="checkbox"/> Microwave <input type="checkbox"/> Television <input type="checkbox"/>	Telephone <input type="checkbox"/> Video recorder <input type="checkbox"/> Washing machine <input type="checkbox"/>
10.	What facilities did you have in your home (tick all that apply)?	A separate kitchen <input type="checkbox"/> Separate bathroom <input type="checkbox"/> Inside taps <input type="checkbox"/> Only outside taps <input type="checkbox"/>	No toilet <input type="checkbox"/> Pit/bucket toilet <input type="checkbox"/> Outside flush toilet <input type="checkbox"/> Inside flush toilet <input type="checkbox"/>
11.	How many people lived in your home?	Number of people: _____	
12.	How many rooms were set aside for sleeping?	Number of rooms: _____	
13.	In an average month how often did you experience hunger because you went without food?	All the time <input type="checkbox"/> Often <input type="checkbox"/> Hardly ever <input type="checkbox"/> Never <input type="checkbox"/>	
14.	Which of the following statements were true for the family you grew up in (only put a X if the statement is true for you)	1. Our family was so poor we sometimes did not have enough food to eat. <input type="checkbox"/> 2. Sometimes my parents could not afford to send me to the doctor when I was sick. <input type="checkbox"/> 3. My parents did not earn enough money to support a family. <input type="checkbox"/> 4. Does no apply to me. <input type="checkbox"/>	
15	What level of education did your parents have?	Mother >Grade 5 <input type="checkbox"/> Grade 5-6 <input type="checkbox"/> Grade 6-7 <input type="checkbox"/> Grade 10-11 <input type="checkbox"/> Some college/tech <input type="checkbox"/> University degree <input type="checkbox"/> Postgraduate degree <input type="checkbox"/>	Father <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Office
use only

Bhome
1 5
2 6
3 7
4

Bappliances (X)
1 5
2 6
3 7
4

Bfacilities (X)
1 5
2 6
3 7
4 8

Bnopeople

Bbedrooms

Bhunger
1
2
3
4

Bfinance (X)
1
2
3
4

Bparented
1 1
2 2
3 3
4 4
5 5
6 6
7 7

(Please turn over for Section C)

C. Please answer the following questions about your parents while you were a child /growing up				
1.	Which of the following was true of your parents	They saved money <input type="checkbox"/> They had savings accounts <input type="checkbox"/> They had life insurance policies <input type="checkbox"/> They rented their home <input type="checkbox"/> They were paying off their home <input type="checkbox"/> They paid off their house <input type="checkbox"/>		
2.	What employment did your parents have?	Professional/manager <input type="checkbox"/> Senior supervisor/administrator <input type="checkbox"/> Clerk/inspector/sales <input type="checkbox"/> Artisan/skilled labourer <input type="checkbox"/> Unskilled worker/domestic <input type="checkbox"/> Housewife <input type="checkbox"/> Informal sector employment <input type="checkbox"/> Unemployed <input type="checkbox"/>	Mother <input type="checkbox"/>	Father <input type="checkbox"/>

Office Use only	
Csavings (X)	
1	
2	
3	
4	
5	
6	
Cemploy	
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8

D. How TRUE are the following statements about your experiences during your matric year:				
	Totally untrue	A little true	Quite true	Very true
We were expected to be quiet in class and do as we were told				
Teachers encouraged me to be critical of what they taught				
I don't think teachers really liked it when we asked questions				
Teachers often tried to actively involve learners in lessons				
Teachers gave me feedback that helped me to do better				
Teachers did not encourage me to go to the library and read				
Teachers encouraged us to think, and taught us how to think				
I was scared to put my hand up in class in case I looked foolish				
I felt uncomfortable about giving my own opinions in tests				
I was afraid to tell the teacher I did not agree with them				
I found many ways to make learning interesting				
Sometimes my marks were poor even though I studied hard				
I always knew exactly what was expected of me in tests				
When learning, I only relied on teachers notes				
My school did not have a library				
There were computers at school that we could use				

Office Use only	
Dmatexp (X)	
3	2
1	0
0	1
2	3
3	2
1	0
0	1
2	3
0	1
2	3
3	2
1	0
0	1
2	3
3	2
1	0
0	1
2	3
3	2
1	0
0	1
2	3

(Please turn over for Section E)

E. How TRUE are the following statements about your parents/caretakers during your matric year?

	Totally untrue	A little true	Quite true	Very true
My parents helped me to understand my school work better				
My parents encouraged me to do well at school				
My parents punished me when I got a low mark				
My parents helped me to develop good study skills				
My parents were not really interested in my school work				
My parents rewarded me when I got good marks				
My parents played an important role in my studies				

Office
Use only

Dparhelp (x)

0 1 2 3

0 1 2 3

3 2 1 0

0 1 2 3

3 2 1 0

0 1 2 3

0 1 2 3

F. Please circle a number (0-10) in each of the three columns to indicate how much emotional upset you have experienced in the past month

	1. Anxiety	2. Depression	3. Stress	
Extreme				Extreme
	10	10	10	
	9	9	9	
	8	8	8	
	7	7	7	
	6	6	6	
	5	5	5	
	4	4	4	
	3	3	3	
	2	2	2	
	1	1	1	
None	0	0	0	None

Office
Use only

Fpsych

— — —

(Please turn over for Section G)

G. Which of the following financial issues have you had to face as a student at UKZN?

		True	False
1.	I have had enough money to buy all the books I need	<input type="checkbox"/>	<input type="checkbox"/>
2.	I have enough money to pay my university fees	<input type="checkbox"/>	<input type="checkbox"/>
3.	I have experienced hunger because I can't afford food	<input type="checkbox"/>	<input type="checkbox"/>
4.	I have had to work to support myself	<input type="checkbox"/>	<input type="checkbox"/>
5.	I have not had enough money for transport	<input type="checkbox"/>	<input type="checkbox"/>
6.	I have not had enough money for accommodation	<input type="checkbox"/>	<input type="checkbox"/>
7.	I have not been able to afford to have a cell phone	<input type="checkbox"/>	<input type="checkbox"/>
8.	I have not been able to afford necessary internet access	<input type="checkbox"/>	<input type="checkbox"/>
9.	I have had no access to a personal computer	<input type="checkbox"/>	<input type="checkbox"/>

Office Use only	
Gfinance	
0	1
0	1
1	0
1	0
1	0
1	0
1	0
1	0
1	0

9.	Did you apply for a financial AID package from UKZN in 2017	No <input type="checkbox"/>
	Yes (but I was not awarded AID)	<input type="checkbox"/>
	Yes (I received Aid early in 2017)	<input type="checkbox"/>
	Yes (I received Aid after a long delay)	<input type="checkbox"/>
	Yes (I still do not know the outcome)	<input type="checkbox"/>

Gaid
1
2
3
4
5

H. What effect has being taught in ENGLISH had on your academic performance at UKZN (in each column circle one number).

	Understanding lectures	Understanding readings/handouts	Writing tests and exams	
Extreme negative impact	10	10	10	Extreme negative impact
	9	9	9	
	8	8	8	
	7	7	7	
	6	6	6	
	5	5	5	
	4	4	4	
	3	3	3	
	2	2	2	
	1	1	1	
	No impact	0	0	

Office Use only
Hlang

I. Which of the following factors have had a NEGATIVE effect on your academic performance at UKZN?				For office use only
	No effect/ Not relevant to me	A slightly negative effect	A very negative effect	I challenges
Poor self-confidence				3 2 1
Low self-esteem				3 2 1
Not believing in my abilities				3 2 1
Poor health/illness				3 2 1
Feeling stressed				3 2 1
Feeling social pressure to succeed				3 2 1
Fear of failure				3 2 1
Feeling lonely and isolated				3 2 1
Feeling homesick				3 2 1
Having no social support				3 2 1
Having no close friends				3 2 1
Feeling alone				3 2 1
Feeling very different to other students				3 2 1
Having to care for sick relatives				3 2 1
Having to financially support family members				3 2 1
Having to deal with family issues/problems				3 2 1
Difficulties obtaining financial aid				3 2 1
Difficulties with internet access				3 2 1
Difficulties using the LANS				3 2 1
Poor self-discipline				3 2 1
Missing lectures				3 2 1
Not submitting assignments on time				3 2 1
Being lazy				3 2 1
Drinking and partying too much				3 2 1
Mixing with the wrong crowd				3 2 1
Lack of motivation				3 2 1
Difficulty coping with independence				3 2 1
Poor time management				3 2 1
Not having accommodation in residence				3 2 1
Family/social pressure to succeed				3 2 1
Experiencing racial discrimination				3 2 1
Experiencing sexism				3 2 1
Experiencing xenophobia				3 2 1
Experiencing sexual assault				3 2 1
Experiencing physical assault				3 2 1
Not being able to understand university procedures				3 2 1
Not being able to find venues				3 2 1
Uninformed/poor curriculum choices				3 2 1
Not being computer literate				3 2 1
Not knowing how to use the library				3 2 1
Insufficient academic support				3 2 1
Insufficient or inadequate mentoring				3 2 1
Too little small group teaching				3 2 1

J. Which of the following factors have had a POSITIVE effect on your academic performance at UKZN?				For office use only
	No effect/ Not relevant to me	A slightly positive effect	A very positive effect	Challenges
Attending lectures regularly				1 2 3
Giving myself enough time to study				1 2 3
Support from other students				1 2 3
Spending time doing extra reading				1 2 3
Asking questions in class if I do not know something				1 2 3
Talking with my friends about my studies				1 2 3
Having good academic thinking skills				1 2 3
Being able to work under pressure				1 2 3
Having quiet places to study				1 2 3
Being able to be with my family as often as I would like				1 2 3
Receiving help from mentors				1 2 3
Feeling comfortable in the presence of other students				1 2 3
Using past examination papers to revise my work				1 2 3
Being assisted by helpful administrative staff				1 2 3
Being assisted by tutors				1 2 3
Feeling that lecturers respect me and listen to what I say				1 2 3
Feeling confident about my studies				1 2 3
Being able to set clear study goals for myself				1 2 3
Being able to manage my time well				1 2 3
Knowing who I need to talk to when I need help				1 2 3
Having my religious faith to rely on				1 2 3
My family being interested in my studies				1 2 3
Having an understanding partner (boyfriend/girlfriend)				1 2 3
Having strong moral values				1 2 3
Being strongly committed to my studies				1 2 3
Being able to afford personal copies of prescribed texts				1 2 3
The fact that I have received good career guidance				1 2 3
The fact that I make new friends easily				1 2 3
My determination to succeed no matter what				1 2 3
Having a very clear understanding of who I am as a person				1 2 3
Being able to concentrate during lectures				1 2 3
Being able to cope with university workloads				1 2 3
Feeling secure on the university environment				1 2 3
Not being influenced by peer pressure				1 2 3
Being computer literate				1 2 3
Being able to cope with pressure				1 2 3
Knowing how to use the library effectively				1 2 3
Being able to access information on Moodle				1 2 3
Being a member of a study group				1 2 3
Receiving support from my family				1 2 3
Not having to worry about transport to and from university				1 2 3
Having accommodation near to the University				1 2 3
Living in a university residence				1 2 3

K. How true are the following statements for you?	Not at all true	A little bit true	Very true
I don't really know how to study properly			
Even when I learn very hard I do not do well			
I do not know what my lecturers want from me			
I don't know what it means to "structure an essay well"			
I am not sure how to "critically discuss" a topic			
I only rely on lecturers notes when learning			
I am afraid to ask questions in lectures			
I agree with everything lecturers tell me			
Some of my lecturers are unhelpful			
Some of my lecturers are unfriendly			
I am afraid of some of my lecturers			
Some of my lecturers teach too quickly			
Some of my lecturers don't explain things clearly			
Some of my lecturers are not competent			
Some of my lecturers are racist			
Poor accent affects my understanding during lectures			

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L. How do you think about yourself as a student?	Strongly disagree	Disagree	Agree	Strongly agree
I feel confident about my studies				
I know I can solve problems relating to my studies				
I feel confident setting goals for my studies				
I feel confident discussing problems I have with my class mates				
I feel confident when submitting assignments				
Right now, I see myself as being pretty successful in my studies				
There are lots of ways around any problem I might face				
I can think of ways to meet the goals I have set				
I am currently meeting the goals I have set for myself				
I usually manage difficulties I have at university				
I handle the stress of being a student in my stride				
I can cope on my own at university				
I recover quickly from setbacks I have as a student				
I can get through difficult times at university				
I am optimistic when it comes to my studies				
I am optimistic about what will happen in my future studies				
I know things will work out well with my studies				
Things will work out well regarding my studies				
I know I will succeed in my studies				
As a student I believe "every cloud has a silver lining"				

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M. While you have been a student at UKZN have you been part of any of the following groups, and have you received any emotional help, financial support, assistance, or advice from any of the following types of groups?				
	I have been a member of such a group		I have received support/assistance from such a group	
	No	Yes	No	Yes
Sports group	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Group of social friends or class mates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Religious group	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Study group	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Political group	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Student representative council	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Special interest group (hobbies, interests)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community associations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being part of a family group (performing rituals, attending ceremonies, or celebrating important occasions)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify (.....))	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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N. While you have been a student at UKZN have you received any emotional help, financial support, assistance, or advice from any of the following people?		
	No	Yes
Family members	<input type="checkbox"/>	<input type="checkbox"/>
Personal friends	<input type="checkbox"/>	<input type="checkbox"/>
Religious leaders	<input type="checkbox"/>	<input type="checkbox"/>
Students representatives	<input type="checkbox"/>	<input type="checkbox"/>
Lecturers	<input type="checkbox"/>	<input type="checkbox"/>
Fellows students	<input type="checkbox"/>	<input type="checkbox"/>
Academic mentors	<input type="checkbox"/>	<input type="checkbox"/>
Student counsellors	<input type="checkbox"/>	<input type="checkbox"/>
Community leaders	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify (.....))	<input type="checkbox"/>	<input type="checkbox"/>

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O. Do you agree with the following statements?		
	No	Yes
I feel comfortable as a member of the UKZN community	<input type="checkbox"/>	<input type="checkbox"/>
Most of the people at UKZN get along well together	<input type="checkbox"/>	<input type="checkbox"/>
People at UKZN feel as if they belong or fit in	<input type="checkbox"/>	<input type="checkbox"/>
I feel that I can trust people at UKZN	<input type="checkbox"/>	<input type="checkbox"/>
Most of the people at UKZN would not try and take advantage of you if they could	<input type="checkbox"/>	<input type="checkbox"/>

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APPENDIX E



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8/06/2016

To whom it may concern

This letter serves to provide the assurance that should any participant interviewed by Ms Nonhlonipho Biyela , (Psychology Masters student) require psychological assistance as a result of any distress arising from the research project, the service will be provided by Masters one Psychology students and intern psychologists at the University of KwaZulu-Natal, Pietermaritzburg Campus Child and Family Centre – phone 033-2605166.

Yours sincerely,

K.P Maruping

Coordinator of University of KwaZulu-Natal, Pietermaritzburg Campus Child and Family Centre

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Founding Campuses: ■ Edgewood ■ Howard College ■ Medical School ■ Pietermaritzburg ■ Westville