Exploring the conceptualisations of intelligence among Black South African students at the University of KwaZulu-Natal Pietermaritz-burg Campus.

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A thesis submitted in partial fulfilment of the requirements for the degree of Master of Social Science (Research Psychology) in the School of Applied Human Sciences, College of Humanities, University of KwaZulu-Natal.

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DECLARATION

A thesis submitted in partial fulfilment of the requirements for the degree of Master of Social Science (Research Psychology) in the School of Applied Human Sciences, College of Humanities, University of KwaZulu-Natal.

I, *Yvonne Mdakane*, declare that:

1. The research reported in this thesis, except where otherwise indicated, is my original research.
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3. This thesis does not contain other persons' data, pictures, graphs, or other information, unless specifically acknowledged as being sourced from other persons.
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    a. their words have been re-written, but the general information attributed to them has been referenced.
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ABSTRACT

The concept of intelligence remains one of the most widely researched and controversial topics within the discipline of psychology since its introduction in the 1916's. One of the main debates surrounding this concept is that it is a social construct, which means that what is considered an intelligent behaviour in one culture might not be viewed so in another. Thus, there is a need to understand the concept of intelligence from a cultural standpoint. Although studies focusing on the conceptualisation of intelligence among people of African descent have been conducted in some parts of Africa. However, within the South African context there have been very few studies that have focused on this area of research. Accordingly, Black South African conceptions of intelligence remain unexplored, and therefore unknown. This study is thus aimed at understanding how Black South African students conceptualise intelligence within their culture. A qualitative research design was adopted for this study. The study sample consisted of 4 males and 8 female Black South African students from the University of KwaZulu-Natal, Pietermaritzburg Campus. The students were 21 years of age and above, and there were selected using a purposive sampling strategy. A thematic analysis was conducted to analyse data from the in-depth research interviews. Four themes relating to how the students conceptualise intelligence were identified, namely: conceptualizing intelligence, factors influencing conceptions of intelligence, determining intelligence and lastly the nature of intelligence. A close analysis of the research findings indicated that the student's culture, family upbringing and educational background had influence on how they conceptualised intelligence. The overall findings of the study is that within Black South African cultures, intelligence is believed to be made up of several aspects. These aspects include knowledge about oneself and one's culture, being a positive influence in society, being respectful to one's elders, academic excellence and most importantly the ability to financially support one's family. Factors such as Respect, family responsibility and academic excellence were identified as the main factors used to determine intelligence.

Key words: Intelligence, Culture, Black, South Africa, Students, Social constructionism, Conceptualisations of intelligence.

IQOQA

Umcabango wokukhalipha komuntu ungesinye sezihloko esezicwaningwe kakhulu, futhi obanga-ingxoxompikiswano endimeni yezifundo ezicubungula ingqondo, imicabango nokuziphatha, phecelezi iSayikholoji selokhu yasungulwa ngonyaka ka-1916. Umbango ogqamile uma kucutshungulwa lomqondo usuka ekutheni lomqondo wobuhlakani ukhandeka ngokwenhlalo, okusho okuthi okungabukeka kuwubuhlakani kubantu bosiko oluthile, kungabukeka kungesibona ubuhlakani kolunye usiko. Lokhu kukhomba isidingo sokuqondisisa umqondo wobuhlakani ngokwesikompilo. Yize izifundo ezimayelana nokwakheka kobuhlakani kubantu base Ningizimu Afrika zikhona, lezifundo zigxile ezindaweni ezithile nezwekazi i-Afrika; kanjalo zimbalwa ezicwaninga abohlanga eNingizimu Afrikha. Nebala lokhu kukhomba ukuthi ukuqondwa nokucwaningwa komcabango wobuhlakane kwabansundu baseNingizimu neAfrikha kusilele ngemumva. Ngakho ke lolucwaningo luveza indlela abafundi baseNingizimu Afrikha abaqonda ngayo lomcabango wobuhlakane ngokwamasiko abo. Uhlobo locwaningo olugxile ekutholeni imibono, izizathu kanye nezincazelo olwaziwa phecelezi njenge ‘’qualitative research’’ ilona olusetshenzisiwe lapha. Abantu ababeyingxenye yalolucwaningo bekungabesilisa abane (4) kanye nabesifazane abayisishiyagalombili (8) abebala elimnyama futhi abangabafundi esikhungweni sezemfundo ephakeme iNyuvesi yaKwaZulu Natali, esikhungweni sase Mgungundlovu. Laba bafundi bebeneminyaka engamashumi amababili nanye (21) kuya phezulu. Laba bafundi bebetomulwe ngokweziqu zabo ezibalulekile kulolucwaningo. Ukucutshungulwa kwengxoxo mpendulwano ebiphakathi komcwaningi kanye nabafundi, lolu cwaningo kugxile kuhlelo lokuhlaziya olobizwa phecelezi nge “thematic analysis’’. Emva kokucubungula, kuye kwaphuma izihloko ezine (4) ezimayelana nokuqonda kwabo umqondo wobuhlakani ekungabalwa-ukuqonda ubuhlakani, izimo ezinomthelela ekunqondweni kobuhlakani, ukunqunywa kobuhlakani bese kuba uhlobo lobuhlakani. Okucutshungulwa kwemiphumela yalolucwaningo kuveze ukuthi amasiko abafundi, indlela abakhuliswe ngayo emakhaya kanye nokufunda kwabo kunomthelela ekuqondisiseni kwabo ubuhlakani. Imiphumela yalolucwaningo isiyonke ikhombisa ukuthi amasiko abantu abamnyama base Ningizimu Afrika, ubuhlakani bakhiwa iziqu eziningi ezahlukahlukene. Lezi ziqu zibandakanya ukuzazi imvelaphi yakho nesiko lakho, ukuba nomthelela omuhle emphakathini, ukuhlonipha abantu abadala, ukuphumelela ezifundweni, kanye nokubaluleka kokweseka umndeni ngokwezimali. Iziqu ezifana nenhlonipho, ukuzibophezela ezidingweni zomndeni, kanye nokuphumelela ezifundweni yizona ezihambe phambili eziqwini ezikhomba ubuhlakani.

Amagama Ngqangi: Ubuhlakani, Isiko, Abamnyama, iNingizimu Afrika, Abafundi, Ukwakheka ngokomphakathi, Ukuqonda ubuhlakani.

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CHAPTER 1: INTRODUCTION

1.1. Background

The concept of human intelligence is one of the most extensively researched psychological concepts within the field of psychology. Written literature indicates that the study of intelligence dates to ancient Greek (Sternberg, 1990); wherein the early 4th century scholars like Plato and Aristotle began to contemplate on the relationship between intelligence and learning, and what intelligence was or comprised of. Aristotle came into the conclusion that intelligence was nothing but a "quick wit" (Sternberg, 1990). In the 18th century Kant expanded on this and conceptualised it to be nothing than "higher faculties of cognition" (Sternberg, 1990, p. 30).

In recent years, the conceptualisation of intelligence was taken up by theorists such as William Stern, who in 1912 coined the term intelligent quotient (IQ). Following Stern's work Alfred Binet developed the very first intelligence test, he then also introduced the concept of mental age or sets of abilities that individuals of a certain age group possess. The British psychologist Charles Spearman later came up with the concept of general intelligence or *g* factor and asserted that the general factor is the most important entity that underlies all intelligent behaviour (Taub & Hayes, 2000). Spearman's work then led to the development and use of IQ tests as means to quantify intelligence. However, his work created a lot of controversy since other theorist such as Howard Gardner did not share his views of intelligence being a single entity. Gardner asserted that intelligence is comprised of multiple aspects and that people possess these different aspects in varying degrees (Gardner, 1983), he later developed his theory of multiple intelligence. His theory later gained partial support from Robert Sternberg (1990); Sternberg agreed with Gardner on that intelligence was not a single entity, however he disagreed with him in that it is comprised of multiple components. Sternberg argued that there are only three sets of skills which are needed in order for one to survive in his immediate environment, this according to him includes, creative, analytical, and practical skills. Sternberg later developed the theory of triachic intelligence from this assumption (Sternberg, 2012). Although there are many comprehensive theories that have been developed with an aim to conceptualise intelligence, to this day theorist have failed to reach a general consensus on what exactly is intelligence.

1.2. Problem statement.

The problem to be addressed in this project is the negative implications of using Western theories of intelligence and IQ tests to measure the intelligence of Black South Africans. Several scholars (Grigorenko, et al., 2001; Laher and Cockcroft, 2017; Sternberg and Grigorenko, 2005) have shown that the use of culturally biased IQ tests on individuals from diverse groups have negative social implications to those individuals which these tests are performed on. These negative implications often includes them being denied access to high-quality education and employment opportunities which are basic to human survival. However, despite this fact being documented in many studies conducted in South Africa and abroad (Bakhiet & Lynn, 2015; Grigorenko, et al., 2001; Laher and Cockcroft, 2013;) there is still little to no efforts made to develop African based theories of intelligence and IQ tests that will accommodate people from Black South African cultures in general.

Additionally, theories of intelligence and IQ tests are often considered innately accurate measure of intelligence by most people (Sternberg and Grigorenko, 2005); particularly by laypersons and those who are unfamiliar with the purposes and limitations of these tests. Hence, when one group performs lower results than another group, then those who are unfamiliar with the limitations of these tests; may attribute the poor results of that group to genetic or hereditary inferiority. These simplistic explanations often ignores the role of culture, language, and the quality of education on the individuals' test performance. Hence, these simplistic explanations often leads to negative stereotypes being attributed to those individuals who perform lower on these tests (Laher and Cockcroft, 2013). Thus, this then leads to them being socially discriminated as they are viewed as inferior by other groups who perform better on these tests.

The current body of literature does not adequately address the issue of using Western developed theories and IQ tests to understand and determine intelligence among Black South Africans (Laher and Cockcroft, 2017). Few studies have been conducted to explore how Black South Africans conceptualise intelligence within their own culture so that IQ tests can be adjusted to reduce cultural bias.

As a result, there is a gap in literature on how Black people conceptualise and determine intelligence within their own culture. Hence, as an attempt to address this problem, this study aims to bridge this gap in literature through the exploration of how Black Students at UKZN Pietermaritzburg Campus conceptualise intelligence in their respective cultures.

1.3. Conceptualizing the study.

The development of theories of intelligence and IQ tests sparked a lot of debate and controversy within the field of psychology. This controversy was related to the fact that most of these theories and IQ tests were developed in Western cultural contests. However, these tests were later applied to individuals from other cultural groups such as African and Asian cultures. Studies aimed at evaluating the validity and reliability of these tests indicated that individuals from the other contests or cultures did poorly on these IQ tests compared to those from Western contexts (Grigorenko, et al., 2001). This then showed that intelligence is a cultural construct (Grigorenko et. al, 2001), and thus cannot be understood outside of an individual's culture as different cultures have different cultural values and beliefs. And since different cultures hold different beliefs about concepts, this thus means what might be considered an intelligent behaviour in one culture might not be perceived as an intelligent behaviour in another. Therefore, using IQ tests that were developed in Western context as means to measure intelligence among people who are not Western have negative implications. Hence, the argument was that such tests were developed on the basis of Western norms of intelligence, and not of the people being tested. Thus, this renders these tests culturally bias, and thus cannot be considered valid when they are being used to measure intelligence in individuals from other cultures.

The controversy surrounding IQ tests directed some theorists of intelligence (Sternberg, 2004; Grigorenko et. al, 2001; Anastasi, 1992) to advocate for the understanding and studying of intelligence from a cultural point of view. Hence, in recent years there has been an attempt to study and understand African conceptualisations of intelligence. However, even though there have been studies conducted in some parts in Africa (Grigorenko et. al, 2001, Wober, 1974), very few studies have been conducted within the South African context. The current study thus mainly focused on exploring this topic in order to gain a better understanding of how Black South Africans generally conceptualise intelligence. The exploration of these conceptualisations might help us gain insight

on whether cultural factors have an influence on how they conceptualise of intelligence. This will in turn possibly help practitioners gain a better understanding of Black South African concepts of intelligence, and revise and redesign IQ tests in a manner which reduce cultural bias.

1.4 Significance of study

This study is very significant within the field of psychology and other related field because firstly, human intelligence has been defined, as an individual's capability to learn from their experience, adapt to new environments/situations (Sternberg, 2004). This definition of intelligence implies that intelligence plays a crucial role in our survival and adaption to our environment. Hence, studying how we conceptualise intelligence, might help us better adapt to our environment, and also give us insight on why others are able to better adapt to environmental challenges than others. Such understanding might help mental health practitioners working with clients who are experiencing poor environmental adaptation challenges understand such clients better, and in turn improve their services to better suit their clients. Secondly, how we as individuals perceive intelligence also determines the manner in which we view and measure our intelligence and that of others. Thus, in order for us to understand the conclusions that we make about our own intelligence and that of others, it is essential to learn about our conceptions of intelligence (Sternberg, 2000). Thirdly, a lack of knowledge about how a particular community or cultural group perceive intelligence can possibly lead to unintended marginalization of that group, as seen in the cases of administering Western developed IQ on indigenous groups (Laher & Cockcroft, 2013). Thus it is very important that we study and understand cultural conceptions of intelligence as this helps us make better conclusions about the intelligence of others. This is especially important and useful in cases where we have to make conclusions about the intelligence of individuals who are not from the same culture as ours.

1.5. Purpose of the study

A review of literature indicates that within the South African context there have been many studies which have been conducted regarding human intelligence. However, most of these studies have mainly focused on comparing IQ tests results between Black and White South Africans (Bakhiet & Lynn, 2015; Laher & Cockcroft, 2013).

Hence there's is a huge gap in literature on how Black people in South Africa generally conceptualise intelligence within their cultures. This then means that notions of intelligence among Black South Africans remain unexplored and possibly misconstrued within the field of psychology. Hence, the purpose of this study is to explore how Black South African students conceptualise intelligence within their culture. It was anticipated that the information gained in the study will educate both the general public and practitioners working within the field of psychology and related field about how Black people generally conceptualise intelligence.

In order to explore the topic under study, this research sampled male and female Black South African students from the University of KwaZulu-Natal (UKZN), Pietermaritzburg Campus. In-depth qualitative interviews were used as means to collect data, and the data was analysed using thematic analysis. The social constructionists approach was used as a theoretical framework for this study. This approach asserts that things that we view as normal in society, such as our understanding of certain concepts or reality it is socially constructed, and as a consequence it is not an accurate reflection of reality (Galbin, 2014). It assumes that Social constructs are created within particular cultures and institutions and come to prominence in certain historical periods. Hence, social constructs are mainly dependent on historical, cultural, and political conditions, which means that with time they can change over time (Hoffman, 1990), and can also differ from one culture to the next. As a result, social constructionists believe that there are no absolute truths, and embraces the idea of multiple reality (Galbin, 2014). Hence using this perspective as a theoretical framework for this study enabled the researcher to explore the student's conceptualisations of intelligence without bias and judgement as their views were interpreted from both their personal and cultural context, and not from that of the researcher.

1.6. Research objectives and questions.

The objectives of this study are:

1. To explore how Black students conceptualize intelligence
2. To explore how Black students determine that a person is intelligent
3. To establish if cultural beliefs influence the conception of intelligence.

The study is guided by the following research questions:

1. How do Black South African students conceptualize intelligence?
2. How do Black South African students determine that a person is intelligent?
3. Do cultural beliefs have an influence on how Black South African students construct intelligence?

1.7. Outline of thesis

This thesis consist of six chapters, chapter one is the introduction to this thesis. It covers the study's background, contextualisation, purpose, and significance. Chapter two discusses the literature review and provides history and origins of the concept of human intelligence. It also discusses some of the prominent theories of intelligence, and how intelligence is currently determined within the field of psychology. The last part of this chapter discusses the relationship between culture and intelligence and the study's theoretical framework. The third chapter outlines the methodology employed in this study and describes the data collection and analysis process, as well as the ethical considerations employed in this study. Chapter four presents the results of this study, while chapter five discusses the results. Chapter six provides a detailed conclusion of this study and the implications on theory, as well as recommendations for future research based on the findings of this study.

1.8. Conclusion.

This chapter provided an outline of the background of this study, as well as its context. It also discussed the purpose and significance of this study as it relates to the South African context. The last part of the chapter provided an outline of what the subsequent chapters will be focusing on.

The next chapter will provide a literature review of the concept of intelligence, as well as the discussion of the theoretical framework which guided this study.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The study of human intelligence is relatively old and remains one of the most researched and controversial topics in the discipline of psychology since Binet and Simon introduced the Stanford-Binet test in 1916. One of the debates surrounding the concept of intelligence is the fact that intelligence is a social construct, which tends to vary from one culture to another. As a result, despite much focus on this concept, to this date theorists of intelligence have not yet been able to come into an agreement on what intelligence is or what it entails (Sternberg & Grigorenko, 2006). Interrelated to this debate is the argument that the application of intelligence tests cross-culturally is inappropriate considering that these tests were developed in contests that are totally different to those of the indigenous groups applied to. Studies done among people of African and Asian descent (Strenze, 2007; Sternberg, 2004; Okagaki & Sternberg, 1993) have indeed shown that applying such tests on individuals from diverse cultural backgrounds has negative implications. This is because people from different socio-cultural backgrounds construct, and thus conceive intelligence differently. Even though recently there has been a major interest in studying intelligence by considering the influence culture has in conceptualizing intelligence (Sternberg & Grigorenko, 2006), there has however been few studies that have focused on understanding how people of African descent conceptualise intelligence, especially within the South African context. Hence, there is huge gap in literature on how Black South Africans generally conceptualise intelligence.

This chapter seeks to review some of the relevant literature within the field of human intelligence with an aim to explore and understand the relationship between culture and intelligence. We will first look at the history of the study of intelligence and some of the key and influential theories that have been developed in an attempt to conceptualise intelligence. We will then move on to discuss how intelligence has been historically, and currently determined. The last sections of the chapter will then focus on describing the relationship between culture and intelligence with an aim of exploring Western and African conceptions of intelligence. We will end the chapter by discussing the theoretical framework guiding this study.

2.2 History and theories of intelligence

To fully understood how intelligence has come to be conceptualised in recent years it is very important to first look at how it was historically defined and theorised. In this section we will separately discuss its origins and subsequently some of the theories that have been developed in an attempt to understand it.

2.2.1 Origins of the study of intelligence within the field of psychology

The birth of the study of intelligence can be traced back to ancient Greece, whereby Greek philosophers such as Plato and Aristotle attempted to draw distinctions between the cognitive aspects of human nature and the *hormic* or emotive aspects of human behaviour (Sternberg, 2000). Their work in differentiating between cognitive and emotive aspects of human behaviour later proved to be significant as it facilitated the grounds that helped Cicero coin the term we now refer to as intelligence (Hally, 2015). Plato further contributed to the distinction between nature and nurture and postulated that our personality and intellect differences are largely dependent on our genetic makeup.

The work of Plato and Aristotle proved to be effective in providing us with an understanding of the concept of intelligence, however their definition of intelligence still lacked a scientific foundation. Hence, in the last century the notion of intelligence was taken up by Herbert Spencer, Karl Pearson, and Francis Galton, who introduced the study of intelligence, the notions of measurement, evolution, and experimental genetics (Sternberg, 2000). Later, Charles Spearman combined their ideas and came up with a psychological theory. Spearman's theory argued that, if some people are better at all types of cognitive tests than others, then by giving large numbers of tests to a random sample of people and comparing the results of the tests by a process known as correlation, if the hypothesis is true, then all the correlations should be positive (Sternberg, 2000). The tests that Spearman proposed were around the same time of his proposal being developed by Alfred Binet and Hermann Ebbinghaus. Spearman's theory was later contested by Thurstone, who stated that different people have different abilities for solving intellectual problems, and that particularly important among these abilities is the general intelligence (Sternberg, 2000).

Thurstone's theory also went on to explain that there are also specific abilities to deal with specific types of problems under different circumstances; these include mathematical, verbal, visual and memory abilities (Sternberg, 2004). Although there are critics to Thurstone's paradigm of intelligence, his theory has been able to withstand the test of time within the field of psychology.

2.2.2 Prominent theories of intelligence

When looking at the origins of the study of intelligence, it is quite apparent that historically an attempt to understand intelligence has focused on answering three main questions, such as what intelligence is, what are its bases, and how do we measure it in individuals (Deary, 2000). Therefore, one can contend that intelligence as we currently define and perceive it is a total combination of the answers to these questions. Which then means that theoretical definitions of intelligence mainly centre on answering these questions. There are several types of theories that have been developed in attempt to define intelligence. The most prominent theory have been the Psychometric theory. This theory "… tends to conceptualise intelligence in terms of a map of the mind and specify the underlying structures posited to be fundamental to intelligence, based upon analyses of individual difference in subjects' performance on psychometric tests" (Sternberg, 2012, p. 20). One of the prominent psychometric theories is the Cattell, Horn and Carrel theory, or as commonly known CHC theory. The contemporary theories attempting to define and understand intelligence are the systems theories. These theories seek to differentiate systems of structures and mechanisms of the mind responsible for intelligence (Duncan et al., 2000). Examples of systems theories are Howard gardener's theory of multiple intelligence and Sternberg's triachic theory of intelligence. Although there several theories under each cluster, for the scope and purpose of this paper only the above-mentioned theories will be discussed.

2.2.2.1. Cattell-Horn-Carroll theory

The Cattell-Horn-Carroll theory (CHC) traces its origins from the works of Francis Galton, Charles Spearman and L.L. Thurstone. CHC is regarded as one of the most dominant and extensively used theory in the study of understanding human intelligence (Keith & Reynolds, 2010). The theory was developed by combining the conceptual works of Raymond Cattell, John Horn and John Carroll.

The decision to combine their work was done out of the realization that their separate theories had common principles (Hally, 2015). The theory is mainly established on psychometric tests results and based on the belief that they are three hierarchal connected strata's of intelligence (Keith & Reynolds, 2010). The first strata is believed to include narrow abilities, while the second strata is concern with broad abilities, and the third strata is concerned with general abilities, which are also referred to as *g*. The general abilities are important and involved in a wide range of cognitive tasks (Duncan et al., 2000). This theory is thus mainly designed to explain how and why individuals differ in cognitive abilities. Although this theory is viewed as one the prominent and important theories of intelligence in the field of psychology, it has also received a lot of criticisms. One of the major criticisms is its lack of focus on general abilities, it is contended that CHC applications often ignore general abilities in favour of strata II abilities. Critics have noted that the over prioritization of strata II is inappropriate as general abilities explains more variance in test scores and has better psychometric properties (Beaujean, 2015). Furthermore, it is argued that strata II abilities seldom add any additional information beyond that is provided by general abilities.

2.2.2.2. Gardner's theory of multiple intelligence

Another widely accepted theory in the study of intelligence is Howard Gardner's theory of multiple intelligence. Gardner developed this theory after observing individuals who were viewed as extraordinarily talented. His theory, which is largely based on neuropsychological and psychometric evidence contends that intelligence is not unitary but rather multiple (Flynn, 2009). He argued that conventional theories and techniques of measuring intelligence were limiting, considering the fact that the human brain has a wide range of cognitive capabilities and skills (Gardner, 2010). Gardner maintained that an individual might particularly perform poorly at one given task but do extremely well in another given task. This then tells us that individuals most likely possess a wide range of abilities. Hence, if we limit ourselves on how we define intelligence this could be disadvantageous to our understanding of the nature in which the human brain function. On the basis of this assumption, he went on to classify seven types of intelligence that he believed people typically possessed. These include, Linguistic intelligence, Logical or mathematical intelligence, spatial intelligence, bodily kinesthetic intelligence, Interpersonal intelligence, and lastly intrapersonal intelligence.

Although Gardner's theory contributed a lot especially in exploring that intelligence is not unitary but multiple, his theory has received a lot of criticism (Keith & Reynolds, 2010).

His critics argue that Gardeners definition of intelligence is too broad, and that those intelligences he has identified simply represents talents, personality traits and abilities. Moreover, it is contended that there are no valid tests to actually measure these intelligences, and to allow for research on them (Klein, 1997). Despite these criticisms, Gardner's theory remains one of the widely used theories of intelligence across the world.

2.2.2.3. Sternberg's theory of triachic intelligence

Another widely accepted theory of within the field of human intelligence is the theory of triachic intelligence. This theory was developed by American psychologist, Robert Sternberg in the 1980s. Sternberg (2012) agrees with Gardner about the existence of multiple intelligence; however, he argues that they are three of them, and not eight as proposed by Gardner. Sternberg restricted his definition of intelligence to things he believed would lead to real world success, and these included, analytical intelligence or problem-solving ability, creative intelligence, and practical intelligence (Sternberg, 2012). The expanded version of Sternberg's theory also includes wisdom-based skills. This theory posits that individual are intelligent if they are able to firstly, plan and achieve goals that will help them satisfy what they need in their lives; and secondly be able to take advantage of their strengths to make up for their weaknesses in order to survive in their immediate surroundings through a combination of skills (Sternberg, 2012). These skills which he identified as essential for survival are the ones mentioned above, which include problem solving, creative and practical skills. The proposed features of this theory, which are analytical, creativity and practicality are all measurable; and through several studies Sternberg has been able to show that when these skills are measured, they assist in predicting academic and non-academic performance in university settings and help reduce ethnic group differences (Sternberg, 2010). However, Sternberg's theory like the other previously discussed also faces major criticism regarding its unempirical nature. Critics point out that Sternberg's three components of intelligence are interrelated and that there is still a general intelligence at play.

Though, Sternberg's theory is highly criticized for being unempirical, it is the authors opinion that his theory has been proven to more effective in terms of being applicable to real world situations. For example, his theory has been used to explain exceptional intelligence (gifted and mental retardation) in children and also to contend the negative implications of intelligence tests. His theory also assist in examining issues such as learning styles (Sternberg, 1997), and creativity (Sternberg, 1999), something psychometric theories have not been able to do.

While the above discussed theories by no doubt have provided us with tangible theoretical definitions of intelligence. It is also important to bear in mind that they all have been developed within the Western context, and thus are Eurocentric in nature. It is for this reason that their applicability in non-European contests such as Africa and Asia has been heavily questioned. The criticism stems from the fact that since these theories are Eurocentric in nature, they cannot be applied to other contests since conceptualisations of intelligence vary cross-culturally. Despite these criticisms, African-Asian centred theories of intelligence are still yet to be developed within the study of intelligence. Hence, African-Asian theoretical conceptualisations of intelligence still remains obscure within the study of human intelligence. And as a result, the above-mentioned theories are the mainly ones used globally to understand human intelligence.

2.3 Determining intelligence.

As more and more theories of intelligence were developed, the need to scientifically determine or measure human intelligent also grew. Hence, this saw a rise in the development of intelligence tests, formally known as intellectual quotient test or in short "IQ tests" (Hally, 2015). IQ tests are designed to measure a person's intellectual potential or diagnose intellectual potential (Hally, 2015). Below we will discuss the history of intelligence tests as well as the controversies that surround them.

2.3.1 History of intelligence tests

Since intelligence tests are largely based on our conceptions of intelligence, they thus tend evolve as our conceptions of intelligence changes. The earliest scientists to think about measuring intelligence were Paul Broca and Francis Galton (Hally, 2015). They believed that intelligence could be determined through measuring the size of a person's skull.

They theorised that the larger an individual skull is, the more intelligent that the individual would be (Carter, 2015). However, currently, their ideas and techniques have come to be considered out-dated, and thus no longer used to test intelligence.

The first contemporary intelligence test was developed in the 1900s by Alfred Binet and Theodore Simon (Hally, 2015). This test was developed through research which sought to differentiate mentally challenged children from those perceived to be normal, but lazy. This resulted in what we have come to know as the Simon-Binet intelligence test. This test consist of multiple components including logical reason, and naming objects (Carter, 2005). This test became well renowned in both Europe and America and is still extensively used globally. And as a result, this test was later adopted by the American Stanford university psychologist Lewis Terman, and it thus came to be known as the Stanford-Binet IQ test. Terman proposed that a person's intelligence can be measured as quotient of their estimated mental age divided by their chronological age (Hally, 2015).

In 1939 David Wechsler developed and published the first intelligence scale that was exclusively designed to measure adult's intelligence. This is called the Wechsler adult intelligence scale or in short WAIS. He later adjusted this test for younger persons, which he called the Wechsler intelligence scale for children, or WISC (Carter, 2005). Wechsler scales introduced scales which contained separate subscores for verbal and performance IQs. Hence his scales were less dependent on verbal ability than the early versions of the Stanford-Binet scale. His scales were also the pioneer intelligence scales to base scores on standardized bell-curve.

The Stanford-Binet test and Wechsler scales still remain one of the most widely used and accepted IQ tests within the field of psychology. Nevertheless, some less popular tests such as the culture fair intelligence test, developed by Raymond Cattel, and Ravens Progressive Matrices by John Raven are also used to measure intelligence. These tests were mainly designed out of the need to eliminate cultural bias in IQ test.

2.3.2. Controversies surrounding intelligence and standardized testing.

Intelligence tests are hailed for their ability to measure and predict performance. And as a result, they are extensively used throughout many varying fields, such as business, education and in psychology practice. However, they like theories of intelligence also face criticism for their uses and application in society. The Criticism often concern issues of validity, their use in predicting social outcomes, and for being culturally bias (Grigorenko et al., 2001).

Intelligence tests have always received a lot of criticism in society from the onset. Those who are critical of these tests are quite doubtful of their validity, and if they really measure what they claim to measure, which is intelligence. Critics are of the view that environmental factors, such as the quality of education, and school systems can cause differences in test scores that are not based on intelligence (Grigorenko et al., 2001). For example, several studies on performance gap between public (which is known to have poor quality education) and private school points out that students from private schools usually outperform students from public schools in IQ tests (Barnard et al., 2003). Furthermore, others argue that IQ tests do not necessarily measure a person's intelligence, but rather evaluates their test-taking skills (Sternberg, 2012).

The second controversy surrounding IQ tests is its application and use in predicting social outcomes. As an illustration, it has been established through research that general intelligence correlates with some social outcomes, such as high IQ being correlated with job success and wealth (Richardson and Norgate, 2015). Nevertheless, it is important to note that correlational studies by nature only show a relationship between two factors but cannot give an explanation about their cause. Hence opponents of IQ tests argue that they cannot be used to predict such outcomes as environmental factors are more likely to contribute to IQ tests results and the later outcomes in life.

The usage of intelligence test in predicting social outcomes is one of the most controversial issues in intelligence testing. This is because intelligence testing has been historically used as justification tool to marginalize minority groups. For example within the South African context, during the apartheid era intelligence tests were used to subjugate, and justify the exploitation and exclusion of Blacks, coloured and Indian people in educational and work environments (Nzimande, 1995).

During this era, intelligence tests that were developed and standardized on white educated individuals, were purposely administered on Black uneducated South Africans, and the tests results were then used to justify jobs and educational preference and reservations. These IQ tests were also used to demonstrate and exaggerate white intelligence over Black intelligence, and thus further justifying the rationality of the apartheid system (Laher & Cockcroft, 2013).

This South African example clearly demonstration that the use of IQ tests to predict social outcome can be unethical as they can sometimes be used as a tool to justify the discrimination of a targeted group of people. Moreover, abusing intelligence tests in this manner can go unnoticed since the general public consider them to be valid, and thus fair.

Another criticism related to the use of intelligence tests as a predictive measure of social outcomes is the issue of cultural biasness. Culture plays a huge role on how people conceptualise intelligence. Hence, people from various cultures tend to value various types of intelligence, as this is normally based on their cultural belief system of what is considered an intelligent behaviour (Sternberg, 2010). And since general intelligence is a Westernized construct, it is argued that intelligence tests are bias as they cannot possibly describe and measure all cultural representation of intelligence. Thus, result intelligence tests are also criticized for only measuring aspects of intelligence that are emphasized and considered to be indicators of intelligence within the Western cultures (Grigorenko et al, 2001).

Due to heavy criticism surrounding general intelligence tests, over the years psychometricians have sought for ways to make IQ tests more cultural fair. This has been done through considering issues such as context, environmental factors, and language of the people they intend to assess. And even though there are still issues encountered, they have nevertheless through context-based research tried to make IQ tests more reliable and valid.

2.4 Culture and intelligence

As it has been established in the previous section, culture plays an important role in how various people conceptualise intelligence. Hence, we cannot claim to fully understand or attempt to measure an individual's general intelligence without considering their culture and immediate environment (Sternberg, 2004). In this section we will briefly look at how Western and African cultures conceptualise intelligence. We will begin by exploring the concept of culture and how it influences how intelligence is perceived by individuals, and then move on to explore how the above-mentioned cultures construct intelligence within their individual cultures.

2.4.1 How does culture influence the conceptualisation of intelligence?

Within the context of this paper culture is defined as an interrelated set of behavioural, beliefs, norms, and practices that are shared by a group of individuals who possess a common social identity (Lehman et al., 2004). Hence, an individual's culture directly and indirectly influences their perceptual, cognitive, personality and social processes. Thus, culture will therefore also determine how intelligence is constructed within a group as it regulates and represents every aspect of the individual's life (Cocodia, 2014). Moreover, since culture regulates individuals thought processes and behaviour, it can be argued that it will ultimately also determine what or who is considered intelligent within that group through a system of classification (Sternberg. 2004). Hence, there may be certain concepts of intelligence which may be more valued in one culture but be considered inappropriate in another. This then suggest that culture and intelligence are interwoven concepts, meaning we cannot attempt to understand or measure an individual's level of intelligence outside the barriers of their culture or through the lenses of another culture.

Moreover, empirical research points out that conceptions of intelligence sometimes vary even within the same culture. For example, Wober (1974) examined conceptions of intelligence among individuals from different tribes in Uganda, as well as within the different subgroups of these tribes. And he found that there were differences in how the individuals within this group conceptualised intelligence. Some of the groups associated intelligence with mental order while the other groups associated it with mental turmoil. This is because notions of intelligence are sometimes based on our life experiences and social environmental circumstances.

Hence, understanding how individuals conceptualise intelligence does not only pose challenges when it is viewed outside an individual's culture, but also when certain factors or differences within the same culture are ignored. This then suggests that intelligence is not only a cultural concept, but also a relative construct (Cocodia, 2014). Hence this means, if the conceptualisation of intelligence is to be fully explored, it must not only be looked within the lenses of an individual's culture, but other social factors such as, language, education, and general life experience of the individuals in question must also be taken into consideration.

2.5. Western and African conceptualisations of intelligence

The previous sections of this paper have already explored that despite the extensive theoretical work conducted by experts in the field of intelligence, the findings point out that defining intelligence requires it to be viewed not only across cultures, but also within the same culture as it is not only cultural construct but also a relative construct. In this subsection we look at how intelligence is constructed within Western and African cultures, as well as within these cultures.

2.5.1 Western conceptions of intelligence.

Western cultures are mainly characterised by technological activity, industrial organisation, and constant socio-cultural evolution. This means that individuals have to constantly adapt to these changes through developing skills that will enable them to adapt to these changes. Thus, notions of intelligence may include practical skills and abilities, as well cognitive abilities (Lehman et al., 2004). This then suggests that notions of intelligence within the Western culture are historically based, and thus centre on survival and adaption to environmental changes (Cocodia, 2014). Accordingly, Individuals within these cultures use skills such as abstract reasoning, inference, problem-solving and decision making as these are required for everyday functioning. Studies on Western notions of intelligence (Faria & Fontaine, 1997; Pepi et al, 2012; Swami et al, 2008) seems to also indicate that skills related to practical and cognitive abilities are indeed considered the most relevant within these cultures.

For example, in a study which explored people's perceptions of intelligence by Sternberg et al. (1981), it was found that people used cognitive abilities, problem-solving, verbal facility, and social competence to evaluate others and their own intelligence. Another study by Berg and Sternberg (1992) which studied adult's perceptions of intelligence also found that American adults generally consider practical and cognitive aspects of intelligence as the most important aspects of intelligence. However, in reviewing Western notions of intelligence, it is important to note that even though Western countries are generally viewed as a unit, they are relatively diverse cultures, and thus also have a larger number of subcultures. For instance, Cocodia (2014), notes that European countries speak a wide range of languages varying from French, English, and Dutch. This means that within these subcultures they might have different cultural beliefs, and therefore different notions of intelligence. Hence, the assumption that all individuals from Western cultures place huge emphasis on practical and cognitive skills above other aspects of intelligence might be to a certain extent misleading.

2.5.2 African conceptions of intelligence.

African countries by contrast to Western countries consist of diverse ethnic groups and different cultures. They are highly characterised by cultures with diverse beliefs, languages, religions, and social organisations (Idang, 2015). And even though African cultures are noticeably diverse in terms of their social organisations, beliefs and religion, their notions of intelligence appear to share some similarities, and also some differences. Studies conducted on African conceptualisations of intelligence (Ogbu, 1988; Serpell, 1974; Serpell, 1976;), seem to suggest that African notions of intelligence tend to vary from one culture to another. Some African cultures tend to value practical, verbal, and cognitive abilities as important aspects of intelligence, while other cultures value social skills such as respect, wisdom, and responsibility.

For example, a study conducted by Grigorenko et al. (2001) on organisations of conceptions of intelligence in Kenya among the Luo people found that people in this culture consider cognitive abilities and emotional competence as one of the important aspects of intelligence.

While an alternative study (Serpell, 1976) conducted among Chewa people of eastern Zambia find that notions of intelligence in this group were mainly associated with the practical aspects of intelligence. However, these practical skills were exclusive to the Chewa people and differed considerably from those find in Western cultures. It is important to note that in African cultures even though notions of intelligence might slightly differ from one culture to another they all tend to view intelligence as inclusive of all social relationships (Cocodia, 2014). Social aspects of intelligence such as respect, wisdom, social responsibility are generally reported as some of the major important notions of intelligence across most African cultures. This is because most African cultures are communal and synergetic in nature, and also value close kinship ties (Idang, 2014). And as a result, aspects such as respect and social responsibility are important as they help maintain the communal nature of African communities. Hence, in African cultures an individual's intelligence is most likely to be based on these aspects more than the aspects emphasized in Western cultures. This then suggest that skills which are valued and associated with intelligent behaviour in Western cultures are not necessarily valued or perceived as an important indicator of intelligence in African cultures. This is despite the fact that some of these skills also identified as some of the aspects of intelligence in African cultures. This tells us that for a skill to be perceived and valued as an important aspect of intelligence by a specific culture, that skill must first be viewed as playing an important role in the survival or development of that specific cultural group. For example, in both Western and African cultures skills such as cognitive abilities, problem-solving, and decision making are identified as some of the aspects of intelligence. However, in African cultures social skills are viewed to be more significant indicators of intelligence. This is because African societies are collaborative in nature, and social skills are considered very important in facilitating collaborative relationships (Idang, 2015).

The above review on African and Western concepts of intelligence clearly indicates that intelligence cannot be studied outside the cultural context. This is because culture informs what is considered and intelligent behaviour; hence conceptions of intelligence will vary from one culture to the next. Thus, attempting to study intelligence outside of the cultural context we risk making poor if not invalid judgments about it. Therefore, there is great need study notions of intelligence across all cultures, as this will help us understand and make appropriate conclusions about it.

2.6 Theoretical framework: Social constructionism

The basic premise of the social constructionist theory is that reality is socially constructed (Berger & Luckman, 1967). This means what we understand and conceive as reality is shaped by an interaction between socio-cultural and interpersonal processes. Social constructionist theory also assumes that understanding is produced through social interpretation of culture and the inter-subjective influence of family, culture, and language (Hoffman, 1990).

One of the main goals of social constructionists is to explore a set of evolving meaning that individuals continuously create in their interaction (Galbin. 1997). This is because social constructionists are of the view that our understanding of the world or reality is a result of a historical process of interaction and negotiation between groups of individuals (Galbin, 2014). It is believed that it is within the process of these interactions that individuals and groups produce over time, concepts, or mental representations of one another's actions. These concepts are soon adopted into shared roles and played by each member in relation to one another. Later these roles are adopted by other people in society and the shared interactions are institutionalised (Cojocaru, 2010). In this course of institutionalisation, meaning becomes embedded in societies and cultures.
Hence, knowledge and individuals notions of what is reality becomes embedded in the institutional fabric of society (Berger & Luckman, 1967). Thus, according to social constructionists what we perceive and accept as reality or the truth, is not in actual fact an accurate reflection of reality, but rather a product of our own creation.

Social constructionists thus believe that since social constructs are created within the boundaries of specific cultures and institutions, what is considered real or normal in one culture, might not be considered real in another. However, social constructionists regard these different realities from each culture valid. This is because within this theory the idea of objective knowable truth is rejected (Galbin, 2015).

On the subject of intelligence, within the social constructionist viewpoint intelligence is seen as any action which a specific culture defines and value as intelligence (Galbin, 2015). As a result, within this perspective, intelligence is viewed as a relative concept; meaning it depends on how different actions are carried out at different times by diverse groups.

This suggests that within the social constructionist perspective intelligence will have a different meaning for different groups of people who don't share the same culture (Galbin, 2015). Thus, Anastasi (1992) contends that intelligence should be defined as the combination of skills and abilities which a particular group or culture uses for survival and advancement and be defined as intelligence only within that culture. The social constructionist view on intelligence thus advocate for the definition and understanding of intelligence only in relation to the subject's culture and context since this is the only position in which it can be accurately understood. Additionally, social constructionists views language as not just a mechanism for connecting with other people, but a mechanism in which people exist through (Galbin, 2015). Hence, from a social constructionist perspective the focus is not on the individual, but somewhat on the social interaction in which language is created and sustained (Gergen & Gergen, 1991). Language within this perspective is understood as a tool which individuals use to create reality through their use of agreed, and shared meaning that they communicate through language (Berger & Luckman cited in Galbin, 2015 p.84). Thus, our belief about what is true, and the world in general is seen as a product of social constructions. Hence knowledge is seen as intrinsically depended on communities that share the common culture. Therefore, knowledge is thought to be largely regulated by normative rules that are culturally and historically situated. And since knowledge or belief about what is real is seen as depended on the context of culture and history. It is therefore assumed that how it is constructed across the cultural groups will also differ since different groups hold different beliefs, values, and attitudes. As a consequence, social constructionists do not claim to deliver truths (Galbin, 2015).

Lastly, since social constructionists is founded on the principle of absolute truths not existing, it acknowledges and accepts multiple viewpoints (White, 2004). Hence, within the context of research social constructionists are able to consider and accept different viewpoints. Thus, the purpose of research in this approach is to understand how some of the aspects of the world that are usually taken for granted are socially constructed, and thus opening space for alternative viewpoints of reality (Galbin, 2015). Hence, in terms of research methodology, social constructionists believe that the challenge is not proving or convincing others that the methods one used in research accurately interpreted the phenomenon under study, but it is about broadening the prospects of understanding (White, 2004). This fluid outlook about how research should be approached has helped in promoting communication and in incorporation of perspectives. Moreover, the social

constructionist approach stresses the contextual value of how knowledge is or must be produced, as well as its practices which is to strengthen the link between research and intervention; advocating for the need of partnership and participation of those who stand to benefit from the knowledge being produced (Galbin, 2015). Thus, in reviewing the basic tenets of this approach in relation to the objectives of this research, the author believes that this approach is best suited for exploring the topic under study.

2.7 Conclusion

Although there is an extensive amount of literature on conceptions of intelligence within the field of psychology, most of the research done has been conducted within the Western context, and very few within the African context. Hence, there is a gap in literature on how people of African descent generally conceptualise intelligence, especially among Black South Africans. This is unfortunate considering the unjust history of how the apartheid system deliberately used the concept of intelligence, and IQ tests as means to marginalize Black South African communities and individuals (Laher & Cockcroft, 2013).

Moreover, the review of literature above showed that intelligence is a cultural construct that cannot be fully understood or attempted to be measured outside the bounds of culture. Hence this shows that there is a great need for exploring how Black South Africans conceptualise intelligence as this might lead to a better understanding of what their notions of intelligence are, and conversely lead to reviewing current IQ tests.

In this chapter the history and development of the concept of intelligence and how it has evolved over the years was discussed. Theories that emerged as an attempt to conceptualise intelligence were also discussed. These theories are classified into two, one being psychometric theories, and the other being systems theories of intelligence. Notions of intelligence across Western and African cultures were explored with the intention of knowing whether individuals from different cultural contests have the same conceptions of intelligence. Lastly the social constructionist approach was reviewed. This approach assumes that reality is constructed through human activity.

Hence, within this perspective knowledge seen as a product of human action, which is socially and culturally constructed. Hence, social constructionist view intelligence as a social construct that can only be understood within the cultural context that it is constructed in, and in relative to other socio-cultural factors. As a result, social constructionist believe that in order to accurately study this concept one has to use methods that will enhance collaboration between all parties involved in the production of knowledge (Galbin. 2015). Thus, the current study utilized this approach as the theoretical framework since its objectives align with this theory's approach of acquiring knowledge.

In the subsequent chapter the research methodologies and principles that were employed in this study are discussed in detail.

CHAPTER 3: METHODOLOGY

3.1 Introduction

A research methodology is a systematic theoretical analysis of the methods applied in a field of study (Bernard, 2000). It involves specific techniques that are adopted in a research to collect, organize, and evaluate data. Research methodology also define the tools that are going to be used to gather data that is relevant in answering the research question. In this chapter the paradigm and the methodological approaches that were applied in this study will be described and justified in great detail. This will include the study sample, data collection, data analysis, trustworthiness, and the ethical considerations employed in this study.

3.2. Research paradigm and theoretical framework.

Research approaches suggests how enquiries will proceed by indicating how researchers should design and conduct a research study. The common approaches used in scientific research are qualitative and quantitative approaches. For the current study a qualitative research paradigm was adopted. Qualitative research is defined as the study of the nature of a phenomena, including their quality, different manifestation the context in which they appear or the perspective from which they can be perceived (Punch, 2013). Thus, a qualitative approach inquiry seeks in-depth understanding of a social phenomenon within their natural setting (Babbie & Mouton, 2005). Hence, this study adopts a qualitative research approach because it seeks to explore and understand how Black South African students at UKZN Pietermaritzburg Campus conceptualize intelligence within their culture.

Moreover, Punch (2013) explains that a qualitative researcher's main aim is to present an authentic interpretation of a phenomena which is sensitive to a specific social-historical context. What allows qualitative researchers to present such interpretation of the data is that it is open-ended, inductive and that it embodies qualitative explorations (Kelly, 2006). Hence, since the process of meaning differs from one person to the next, and from context to context, it was anticipated that a qualitative design would be more appropriate for the current study.

This is because qualitative research design allows open-ended questions and thus acquire more in-depth understanding of a phenomena-which in our case would be how the students at UKZN Pietermaritzburg campus conceptualise intelligence. According to Babbie and Mouton (2005) through open-ended questions one engages more intimately with the phenomenon being studied. This is because it enables rich, open-ended data which could be subjected to further clarification and ratification. Clarification and ratification are two very important concepts inherent in qualitative research. These allow one to engage more deeply with the phenomena, as participants can be asked to clarify their responses and provide more clear and in-depth responses (Neuman, 2006). Since conceptualisation of intelligence is a complex and arguably a sensitive topic. It was thus important for the study to select an approach which would allow the research participants in this study to be able to clarify what they meant or were saying by being able to ask them to elaborate on their answers on the topic at hand.

To keep in line with the qualitative research design, this study adopted a social constructionist framework. According to Creswell (2013) a social constructionist approach is an interpretive framework whereby individuals seek to understand their world and develop their own particular meanings that resembles their experience (Creswell, 2013). Creswell (2013) further explain that these meanings are not innate within each individual, but rather formed through interactions with others. Hence, within the social constructionist's framework, knowledge and truth are viewed as created through the interactions of individuals within society (Andrews, 2012). Terre Blanche et al. (2006) state that, social constructionism consider language to be very important as language predates concepts, and thus allow individuals to structure the way they understand or experience their immediate environment. In this study the social constructionist paradigm was applied in exploring how the students in this study conceptualised intelligence within their respective cultures. The interpretative framework approach of social constructivism was applied by asking the students open-ended questions; this allowed them to fully describe how they understand intelligence. The Researcher's role was only limited to listening to the student's descriptions of how they viewed intelligence, and to interpret the findings based on the student's background.

3.3 Research design

The purpose of a research design is to ensure that the findings gathered enables the researcher to answer the research as explicitly as possible (Bernard, 2000). Hence, research design is defined as the overall strategy that is chosen to integrate the different components of the study in a coherent and logical manner, thereby ensuring that the researcher effectively addresses the research problem. Hence, research design is considered the blueprint for the collection, measurement, and analysis of data collection (Creswell, 2007). The research problem determines the type of the research design the researcher needs to apply in order to answer the research problem (Bernard, 2000). Thus, due to the qualitative nature of the research problem of this study, it was decided that an exploratory qualitative research design will be more appropriate in answering the research question as opposed to a quantitative research design.

3.4 Sample

Sampling in research is a process whereby a researcher selects a representative group from a population under study (Camic et al., 2003). The main aim of sampling is to select a sample that will best represent the population in which the researcher aims to draw conclusions about (Cozby, 2009). However, in qualitative research the emphasis when doing sampling is not on representing the population, but rather on making sampling choices that will deepen understanding of the phenomenon at hand. And as a result, in qualitative studies researchers are more likely to use non-probability sampling. A non- probability sampling technique is a sampling method whereby an individual's likelihood of being selected for membership in the study is unknown (Babbie & Mouton, 2001). The sampling method and the characteristics of the research sample for this study are discussed below in great detail.

3.4.1 Sampling method.

This study utilized purposive and convenience sampling method to recruit participants for the study. Convenience sampling is a specific type of non-probability sampling technique that relies on data collection from population members who are conveniently available to participate in a study (Kelly, 2006).

Convenience sampling strategy was employed in this study to enable the researcher to recruit participates as quickly as possible since the study was given ethical clearance for a limited amount of time. Hence, it was decided that this method will help the researcher recruit students in the shortest amount of time.

The study also employed purposive sampling as another method to recruit research participant. Purposive sampling is a type of non-probability sampling strategy in which research participants are chosen for their theoretical relevance for the study (Babbie & Mouton, 2005). Hence, in purposive sampling the participants are chosen to take part in the study because they fit the profile of the people that need to be reached in order to answer the research problem. Accordingly, it was decided that purposive sampling will be the best method for conducting this study since the study's primary focus was on exploring conceptualisations of intelligence among Black South African students within UKZN, Pietermaritzburg Campus.

3.4.2 Sample characteristics.

The students were selected using three main criteria, which is race, age, tribe, and the institution in which there were studying at the time of this study. Only students who were Black South African students from UKZN, Pietermaritzburg campus were selected to participate in the study. This particular criterion was used because the researcher specifically wanted to explore how Black South African students conceptualise intelligence. These participants were male and female students who were 21 years of age and over and were registered for the 2018/2019 academic year at the University. Research participants were also selected based on their availability and willingness to take part in the study.

3.4.3 Sample size.

A sample size refers to the number of participants included in a study. For this study 9 students were selected. The decision to limit the research sample was influenced by the theoretical methodology used for this study. According to Creswell (2011) in qualitative research theoretical saturation is often reached between 8-15 cases; hence he proposes that the researcher keeps the sample size small, as big samples tend to lead to data overload.

Thus, due to theoretical and time constraints, the researcher decided that including only 12 participants in the study would help yield the best research results. The study had initially aimed at selecting 15 students across the different faculties within the university. However, possibly due student's time constraints, the study ended up with a total number of 9 students from only 4 faculties.

The study also had a noticeable disparity in terms of gender representability of the research participants. The researcher had initially aimed at including an equal number of both males and females in the study. However, this was not successful as we ended up with only 3 males and 6 female participants in the study. The disparity in gender representability is also possibly linked to lack of interest on the topic understudy, or time constraints experience by male students. Considering that this was a small-scale qualitative study, the results can only be considered in terms of transferability to similar contests. Thus, the results of this study can only be transferrable to Black South African students who are from similar contests as the participants who took part in this study.

Another important aspect to note about the study sample is the aspect of tribe representability. Black South African tribes are often perceived to have the same cultural norms; however, this is not entirely true. Even though these tribes do share some common cultural norms, most of them have distinct cultural custom and practices that are not found in the other tribes. Regarding this study, although we managed to recruit participants from various tribes, which included, Zulu, Xhosa, Tsonga, Sotho, and Venda. Other Black South African tribes such as Pedi, Ndebele and Tshwane were not represented in the study.

This can be attributed to possibly lack of willingness to participate in this study by students who were from these tribes. On the other hand, this can also be attributed to the fact that UKZN is located in a province which is mostly populated by individuals from the Zulu tribe, and very few individuals from other Black South African tribes. Thus, this also needs to be taken into consideration when evaluating the results of this study. Nonetheless, since the tribes which were not represented in the study also share some common cultural beliefs and race with the students who took part in this study.

It is anticipated that their views regarding intelligence might be the similar to those of research participants in this study. Hence, it must be noted that where the author states Black South African cultures in the study she is referring to all the tribes identified above.

3.4.4 Recruitment.

Recruitment was done between November 2018 and February 2019 after obtaining gatekeepers approval and ethical clearance (see Appendices 1 and 2). It was initially proposed that participants were going to be recruited through poster and flyer advertisements. However, after careful consideration the researcher thought it would be cost and time effective to recruit participants through directly approaching and requesting students to participate. This recruitment procedure was conducted on the campus library entrance in a three-day period. The library was chosen as the suitable recruitment site because it was thought to be the most likely place where the researcher could easily access students from the different faculties. This method was carried out through approaching students who were on their way to the library, and verbally asking them to participate in the study. A brief verbal description of the study and participation requirements was given to each student who showed interest.

Upon hearing about the study those who were interested in becoming research participants were asked to answer a check list which was intended to assess if they met the study's criteria for participation (see Appendix 3). The checklist was included the following questions:

1. Are you Black?
2. Are you a South African citizen?
3. Which South African tribe to you identify with?
4. What is your gender?
5. Are you 21 years of age and above?
6. Are you currently registered as a student in this campus?
7. Are you willing to be interviewed for 45 minutes to an hour at any day of your choosing, between the month of November 2018 and February 2019?
8. Are you willing for your interview to be audio recorded?

Contact details of all the students who met the above criteria, and who were willing to take part in the study were taken on the spot. The researcher later contacted the prospective research participants to arrange for the in-depth interviews. Appointment dates and time were decided by the students in order to avoid disrupting their lecture schedules. Even though initially 18 students were recruited, only 9 were able to come for the interviews. Table 1 below depicts the demographical details of the 9 students who took part in this study. Names have been changed to ensure anonymity.

Table 1

Demographic Details of Students

	Name	Sex	Race	Age	Tribe
1.	Lihle	Female	Black	22	Sotho
2.	Tinyiko	Male	Black	21	Tsonga
3.	Liwa	Female	Black	25	Zulu
4.	Nelly	Female	Black	20	Zulu
5.	Sethu	Female	Black	21	Sotho
6.	Nhlanga	Male	Black	23	Zulu
7.	Norah	Female	Black	24	Venda
8.	Anathi	Female	Black	25	Xhosa
9.	Bonga	Male	Black	28	Zulu

3. 5 Data collection

Data collection is a process whereby the researcher begins the process of gathering information about the study at hand (Silverman, 2005). One of the commonly used data collection methods in qualitative research is semi-structured in-depth interviews. Hence, in this study data was collected using this method. According to Kelly (2006) a semi-structured in-depth interview is a face to face loosely structured interview which allows both the interviewer and the research participant the freedom to explore additional points and to change the direction of the questions/answers if and when necessary, during the interview.

Therefore, semi-structured interviews gives the researcher the opportunity to capture rich and descriptive information about how the research participants think about the topic under study (Willig, 2008).

The intimate and private nature of one-on-one in-depth interviews is also very important because it enables the research participants to express their beliefs and experiences without fear of being judged by others, especially if the topic under study is sensitive or go against social norms (Babbie & Mouton, 2005). Even though this study was not sensitive in nature, the researcher thought that face to face in-depth interviews would be more appropriate in exploring the topic under study as this method was going to enable the students to express their views freely without fear of being judged or being shy as seen in other qualitative data collection methods such as focus group discussions. The researcher also used this method because she wanted to create an environment where she can easily establish rapport with each research participant. Rapport refers to the level of comfort in the interactions between the researcher and the research participants (Bell et al., 2014). Establishing rapport with research participants is a very important aspect of qualitative research. This is because establishing rapport ensures that the research participants give the researcher better responses due to the trust and mutual understanding that is established by forming a good relationship between the two of them (Babbie & Mouton, 2005).

The semi-structured interviews were guided by an interview schedule that was developed by the researcher with the guidance of her supervisor. The interview schedule contained eight main research questions (see Appendix 4). The first two research questions on the interview schedule was aimed at exploring the student's conceptualisation of intelligence, and at establishing whether or not their conceptualisation of intelligence was influence by their cultural background. The 3rd and 4th research questions was aimed at exploring how they determined that a person is intelligent, and if they thought that intelligence was something individuals were born possessing. While the last three main research questions was aimed at exploring what the students associated with being an intelligent person, and if they thought individuals can develop their intelligence. The last question was dedicated at affording the students with the opportunity to add inputs, and comments that they may have wanted to add when they were being interviewed.

This helped the students further clarify certain views they expressed during the interview, and also allowed them to ask any questions relating to the topic under study. The section below describes the process that was undertaken when conducting each of the research interviews.

3.5.1 Conducting the research interview.

All students in the study had access to email and telecommunications. Hence, the researcher was able to maintain contact with them in order to set the interview appointment on the day that was suitable to them. Two days before the interview the researcher contacted the students telephonically to remind them of their research interview. The researcher also during this time emailed the participants an electronic copy of the informed consent and encouraged the participants to read it before the interview. This gave the participants time to review their rights as participants in the study, and to note down any questions and concerns associated with being part of the study. These concerns were to be addressed with the researcher before the interview. The informed consent and consent for the research interview to be recorded was written in English and were not translated to any African languages as all the students were fluent in English (see Appendices 5 and 6).

On the day of the interview, the researcher clarified the informed consent in detail to each of the research participants. The emphasis was on the participant's right to participate and to withdraw in the study. The researcher also focused on issues concerning confidentiality, and consent to audio-record the interview. If after their rights were explained to them, they agreed to participate in the study, the researcher then requested that they sign both the informed consent and consent to be recorded forms separately. This process took approximately 15 minutes as most of the students had already read their informed consent form prior the interview. After signing the informed consent the participants were asked if they needed a mini break before they could start the interview. If they didn't require the mini break the researcher began the research interview. The research interviews were between 30- 60 minutes long.

3.5.2 Language used to collect data.

As explained above, most of the students were fluent in English, hence data was collected using English. However, since most of the participants were Black South African students whose first language was mostly IsiZulu and IsiXhosa, there were instances where they would express their views in these languages. This was especially in cases where they needed to express interjections, Zulu/Xhosa proverbs, and sayings. Nevertheless, this did not affect the data collection process as the interviewer was also fluent in both Xhosa and Zulu. The data collector also would paraphrase or request participants to clarify if they mentioned certain Xhosa/Zulu sayings in order to make sure that she really understood what the participants intended to convey. This also helped in re-orienting the participants back to expressing their views in English.

3.5.3 Data transcription.

Data transcription is a process whereby the researcher produces a written version of the research interviews (Hancock et al., 2009). This process results in a written script of all the recorded research interviews or conversations which the researcher later on uses to conduct data analysis. In this study, transcriptions of research interviews were done immediately after the data collection phase. There was no formal transcription conventions followed as the study did not aim to analyse the latent meaning of the research participant's views, but rather their patent views. Hence, the focus of the transcription process was on ensuring that the researcher captures the research participant's views as much as possible. The interviews were all transcribed in English. However, as explained above, since there were parts in the interview where participants expressed themselves in isiXhosa/isiZulu, these sections were directly transcribed in isiXhosa/isiZulu and then translated into English in parenthesis. This was done to ensure that the original views of the participants were not in any way distorted, while simultaneously ensuring that any second language reader is able to comprehend what was being conveyed by the research participants.

The translation process was done using a one-way translation method. This process was conducted by the researcher since she is fluent in both Zulu/Xhosa and English. A one-way translation method is "…a text interpretation technique that is conducted by a bilingual person with demonstrated knowledge in the target language, as well as familiarity with the content area, accomplishes the

instrument translation from the original language to the target language…" (Dhamani & Richter, 2011, p. 5). One way translation methods are often used and recommended for small scale and low budget qualitative studies because of their low cost and simplicity (Carlson, 2000). Considering that the current study was a small scale and lacked budget for hiring an external translator, the researcher conducted this process herself. She was able to translate the tests without a difficulty since she is fluent in both the original (Zulu/Xhosa) and target language (English).

3.6. Data analysis

Data analysis in research is a process whereby the researcher systematically apply logical research techniques in order to summarize, describe, illustrate, and evaluate the data collected in a study (Hancock et al., 2009). In this study, a qualitative data analysis tool, namely, thematic analysis was employed to organize and describe the collected research data. Thematic analysis is a technique for identifying, analysing, and interpreting patterns of meaning within a data set (Braun & Clarke, 2006). This technique also helps in organising and describing data in a detailed manner (Braun & Clarke, 2006). There are six phases or steps proposed by Braun and Clarke (2006) that are involved in undertaking thematic analysis. These steps were methodically followed in analysing the data in this study.

In the first step, which involves familiarising oneself with the data, the researcher repeatedly read each transcript critically and analytically in order to understand and familiarize herself with the data. The researcher also made notes on the meaning, similarity, and disparity of the data at this stage. Once the initial ideas were noted about the data set, the researcher then moved on the 2nd step which involves analysing data through coding. This process involved coding interesting features of data set that was relevant to the research question. This was done through identifying cases where participants mentioned words such as "respect", "responsibility" and "education". This was performed methodically through the entire data set of the 9 interview transcripts.

Once all relevant data was coded, the researcher moved on to next step which involves searching for themes. In this step, similar codes which were generated in the previous step were grouped together in order to form themes.

For instance, codes such as “being responsible to one’s family needs” and “showing respect to others” were grouped together as a prospective theme for indicators of intelligence. In the fourth step, which involves reviewing themes, the researcher checked if the developing themes worked with the coded extracts of the data. All coded data which did not work with the themes were discarded. The fifth step involved naming and defining the themes. In this step, themes which were identified in the previous step were refined and clearly defined to ensure that each theme had a unique but coherent story, and that each theme related well with other themes.

The sixth and final step of the thematic analysis technique which involves writing the final report, according to Braun and Clarke (2006) should be considered by the researcher as the last chance to ensure that themes connect logically and meaningfully. In this study this final step was incorporated through re-assessing if themes were coherent with the initial codes and if they were logical and meaningful in relation to the research question.

The rigorous and methodological nature of thematic analysis was very useful in helping the researcher to organize data, and consequently come up with elaborate themes that helped in answering the research question.

3.7 Strategies employed to ensure trustworthiness in this study.

According to Shenton (2004) trustworthiness in research refers to the soundness of the study in terms of the methods used for data collection, analysis, interpretation, and presentation of results. While the credibility and validity of a quantitative study is largely dependent on how its study instrument is constructed, in qualitative studies the researcher him/herself is regarded as the instrument (Patton, 2002).

Hence, the credibility and validity of qualitative studies are very much dependent on the efforts that the researcher takes to ensure that the study is indeed credible and valid. This means in order to ensure that he/she produces a study that is trustworthy he/she has to employ certain research strategies and methods when collecting, analysing, and interpreting research data (Patton, 2002).

In qualitative research the component of trustworthiness includes credibility, dependability, transferability, and confirmability. In this study these components of trustworthiness were employed to ensure its rigor. Below is a detailed description of how each were employed.

3.7.1. Credibility.

Credibility in relation to qualitative research refers to the extent to which a research account is believable and true, especially with reference to the level of agreement between research participants and the researcher (Shenton, 2004). In quantitative research the concept of credibility is comparable to that of internal validity, which seeks to ensure that the study measure or test what it actually intended test (Shenton, 2004). Credibility is considered one of the most important components of establishing a study's trustworthiness because it requires the researcher to clearly link the findings of the study with reality in order to demonstrate the validity of the study's findings (Patton, 2002). There are several techniques that are recommended for establishing credibility. However, due to time constraints and resource limitations, this study only utilized, 1) Member-checking, 2) adoption of well-established qualitative research methods, 3) developing early familiarity with participants culture, 4) employment of tactics to that help ensure honesty from research participants, 5) and negative case analysis to establish credibility. These are discussed in detail below.

3.7.1.1. Member checking

Member- checking, which is also known as correspondence feedback is considered as one of the most important techniques that are used to establish credibility in qualitative research (Guba and Lincoln, 1985). It involves sharing the research data, interpretations, and conclusions with the participants, which then allows them to state what their intentions were, edit errors and provide additional information if necessary. In order to establish credibility in this study, member-checking was employed by the researcher in validating all the research transcript. After the transcribing stage was completed, the researcher sent a letter (see appendix 7) to all the research participants, which requested them to review and edit where they felt the transcripts did not represent or capture their views correctly. This letter was also accompanied by a correspondence check form (see appendix 8), where the research participants were asked to give feedback regarding their reviews.

The responses from the member-checks indicated to the researcher that she had captured the participant's views correctly. Hence this gave her confidence in that the data she was working with was reliable.

3.7.1.2. Adoption of well-established qualitative research methods

Another reliable method employed to ensure credibility of this study was through the adoption of well-established qualitative research methods. According to Yin (1994) one of the most important ways of establishing the credibility of any qualitative studies is through incorporating accurate operational measures for the concepts that are being studied. Hence, it is recommended that specific procedures be utilised. This could include the manner in which questions are asked during the research interview sessions. And also, through ensuring that the techniques used for data analysis are derived from those that have been proven to be successful in past comparable studies (Shenton, 2004). The researcher in this study ensured that all methods used in the data collection, analysis and interpretation stages were in line with qualitative research and from credible sources. This included using semi-structured interviews for data collection, and thematic analysis for analysing data. These methods have been proven effective in producing credible qualitative studies. They have also been utilized and recommended by several prominent qualitative researchers such Babbie and Mouton (2005), Lincoln and Guba (1985), and Braun and Clarke (2006).

3.7.1.3. Developing early familiarity with participant's culture.

The third method utilised to establish credibility was through developing early familiarity with participant's culture. This technique is achieved though gaining prior knowledge about the research participant's culture, and via preliminarily visits to the organizations in which the study will be conducted (Shenton, 2004). According to Lincoln and Guba (1985) developing earlier familiarity with the culture of the students can help foster trust between the research participants and the researcher. Lincoln and Guba (1985) also assert that failure to develop familiarity with the participants' culture can lead to several problems later on in the research processes. Some of these problems can include the researcher being received with suspicion by the research participants.

In order to eliminate such problems in this study, the researcher familiarised herself with the University's rules and regulations regarding conducting research with students. This included knowing the regulations that explains the procedures that needs to be considered when conducting research within the Campus premises and the treatment of the research participants. This helped the researcher avoid contravening the university's rules that might have potentially made students suspicious of her intentions in conducting the study. This knowledge was demonstrated by encouraging voluntary participation through explaining informed consent to research participants. Hence, in this process the participants gained trust in the researcher as during this process they were able to learn more about the study, and the reason why they were being requested to participate in it.

Another aspect which made it easy for the researcher to establish rapport with the research participants, is the fact that the participants in this study were all Black South African students, and therefore shared similar culture with the researcher. This made it very easy for the researcher to understand certain cultural concepts that the students expressed during the research interviews. Hence, the researcher was able to engage well with the students which in turn helped ensure that the participants gave their input to the topic with no reservations since they felt understood by the researcher.

3.7.1.4. Negative case analysis

The last technique used to establish credibility in this study is negative case analysis. According to Patton (2002) negative case analysis encompasses examining and reflecting on elements of data that do not support or appear to contradict patterns or explanations that are emerging from data analysis. Negative cases may also help revise, broaden, and confirm patterns that arise from data analysis (Lincoln & Guba, 1985). In this study the researcher actively pursued and incorporated data that seemed not to fit with the rest of the data set. This action help in ensuring that the researcher does not select and include data that only support popular viewpoints of what the majority of the students conceptualised to be intelligence, but also included some of the rare viewpoints by the minorities. By doing this the researcher helped ensure that the views of the participants were not altered to suit a certain narrative but represented the participant's true reflections of how they conceptualised intelligence.

3.7.2 Transferability

According to Guba (1981) transferability refers to the degree to which qualitative research can be generalised or transferred to other contests or settings. Lincoln and Guba (1985) also assert that due to the small nature of qualitative research samples, it is hard for the qualitative researcher to prove that the research findings will be applicable to other settings. Hence, the qualitative researcher's duty is to provide the data base that makes transferability judgements possible for those who might potentially want to apply or replicate their study. This can only be achieved if the researcher provides a detailed account of the entire research process. Especially through outlining what the research participant's express to the researcher into the context of the surrounding socio-cultural environment that the study is framed around (Guba & Lincoln, 1985). Following this advice, the researcher in this study ensured that she used comprehensive qualitative research methods in data sampling, gathering and analysis. This was done so that it simply enables replication of this study for those who might want to conduct similar research in the future.

Furthermore, the use of purposive sampling method in this study means that the researcher was able to have students who were genuinely interested in the research question. The participants were Black South African students from UKZN who were willing to share their views on how they conceptualise intelligence. This means that the information that was gathered in this study was nothing but their true reflection of how they understand intelligence. Therefore, even though the sample of this study was very small in size, it was nonetheless appropriate for answering the research question. However, it is very important to state that the findings in this study can only be appropriated to similar contests.

3.7.3 Dependability.

Dependability refers to the level of consistency and the reliability of the study findings, as well as the extent to which the study procedures are documented, enabling someone outside of the study to follow, examine, and critique the research process of the study (Shenton, 2004). Therefore, the best way that a qualitative researcher can achieve dependability in a study is through ensuring that the different research stages, such as the development of the research question, data sampling, data collection, and data analysis are coherent with one another.

Furthermore, the researcher needs to take extra effort in ensuring that each of the different stages are well described and presented in the final research report. Hence, the logic used for sampling participants, the events that took place in the study or interviews, and how the researcher arrived at the conclusions about the study must be clearly articulated. This must also be written in a manner which enables anyone outside of the research process to have a full picture of what transpired during the entire research process (Guba, 1981). The final research report as a consequence must be presented as a prototype model for future research (Shenton, 2004).

In the current study the researcher was directly involved in all of the research stages. Thus, in this paper she is able to provide a comprehensive description of the theoretical background which guided this study. The researcher also clearly outlines in this paper the study objectives, and all methodologies utilised in collecting, analysing, and interpreting the research data. In addition, the context of the study and logic used to select research participants, the data collection process and how data was analysed is clearly described and presented in this paper.

3.8 Ethical considerations

Ethics refers to beliefs about the conduct and principles that inform rules for proper behaviour.
In the context of social science research, ethics are intended to monitor how social science researchers conduct their research in an ethical and professional manner (Graveter & Forzano, 2009). Ethics are important in social research as they help protect the rights of the research participants during and after their engagement in a study. The ethical clearance for conducting this study was approved by UKZN Humanities Research Ethics Committee (HREC) in 2018 (see Appendix 2). In addition to ethical clearance, permission to conduct research with students was granted by the University registrar in 2018 (see Appendix 1). To ensure that the rights of all students were honoured in this study principles such as informed consent, confidentiality, cost/benefit ratio, and collaborative partnerships (Wassenaar, 2006) were employed in this study.

3.8.1 Confidentiality.

Confidentiality in the relationship between the researcher and the research participant is regarded as the researcher's obligation and the research participant's right. Therefore, it is very important that the researcher ensures that the information shared by the students during the research process

is protected and is not in any way used against the research participant (Graveter & Forzano, 2009). To honour this principle, the researcher took extra measures in ensuring that the students remained anonymous. This was done through using alias names to reference the participant's views in the final report, and in the transcription phase. Furthermore, the researcher ensured that only she and the research supervisor were the only ones who had access to the transcripts and interview audios. Additionally, after each interview the researcher ensured that she uploaded the recorded interviews on an online server that she only had access to, and the recorded audio were deleted from the recording device. This was done to avoid instances where the audio device is stolen or lost and the recorded data is lost along with it, and thus accidentally exposing the identity of the research participants.

3.8.2 Cost/benefit ratio.

The principle of cost/benefit ratio was applied in the study through informing students at the onset that there will be no rewards for participating in the study. However, it was explained to the participants that their participation in this study might benefit them indirectly and possible society at large; since the research findings might add to existing knowledge about how Black Students conceptualise intelligence.

3.8.3 Collaborative partnership.

Another principle that was considered in this study was collaborative partnership. According to Manual et al. (2004) working collaboratively with research participants in all stages of the research process ensures that the researcher maintains a good relationship with participants and helps in minimizing the possibility of exploiting them. To honour this principle in this study, the researcher ensured that she consistently put the research participant's needs, time, opinions, and beliefs ahead of her own. This was done through allowing research participants to be the ones who set the time and date for the research interviewed. The researcher also ensured that she treats each research participant with respect during the interviews and allowed each and one of them to express their views without fear of being judged.

3.9 Conclusion

This chapter gave a detailed description of the research methodology of this study. It provided the description of the theoretical background, recruitment of research participants, data collection and analysis. It also went further to discuss the ethical considerations employed to safeguard and protect the rights of the research participants who took part in this study. The next chapter will present the research findings of this study.

CHAPTER 4: RESULTS

4. Introduction

This chapter presents the results of this study which were obtained from the in-depth interviews with the nine research participants from UKZN, Pietermaritzburg Campus. The research interviews provided extensive personal accounts of how the students conceptualised intelligence, and they also helped with illuminating factors that influenced how the students came to conceptualise and determine intelligence in themselves and others. While each of the students delivered their individual accounts and beliefs about intelligence, it is important to note that these accounts were guided by their cultural and educational conditioning as Black South African individuals.

This chapter will present and describe the results of this study by citing extracts from the interview transcriptions. The data will be presented in the form of themes-which were coded and developed during the data analysis stage. The extracts will be referenced in extract text format for clarity purposes. In the extracts the participants are referred to by their pseudonyms, this is meant to protect their identity. There are parts in the extracts where some of the participants expressed themselves in isiZulu/isiXhosa which makes it slightly challenging to read if you are someone who is not fluent in IsiZulu/IsiXhosa. In such cases, the IsiZulu/IsiXhosa expressions are written in italics, and the English translation follows in parenthesis [i.e., *umuntu* (a person)].

There were four major themes that resulted from the data analysis of the in-depth interviews, these were: 1) conceptualising intelligence; 2) factors influencing the conceptualisations of intelligence; 3) determining intelligence; and 4) nature of intelligence. The fourth theme had two sub-themes, these were: a) factors promoting intelligence; and b) factors hindering the development of intelligence. The first theme was explored because the researcher wanted to understand how the students conceptualised intelligence within their culture. Thus, this theme answers the first main research question of this study.

The second theme was explored because the researcher wanted to explore if the student's cultural background had an influence on how the students perceived intelligence. While the third theme was aimed at exploring how the students determined intelligence in themselves and others.

And the last theme was aimed at exploring how the students perceived the nature of intelligence. This theme resulted in two subthemes which explored some of the factors that can potentially develop or hinder the development of a person's intelligence. In the following sections these themes are presented and discussed in great detail.

4.1 Conceptualising intelligence

Seeing that this study was mainly aimed at exploring conceptualisations of intelligence, it seems appropriate to first provide information on how the students in this study conceptualised intelligence. The findings from the in-depth interviews suggested that within the Black South African culture, intelligence is conceptualised in several ways. This includes, having a sense of self-awareness and knowledge about your family and cultural background. It also means being able and being willing to financially provide for your family, having respect for your elders, maintaining a good public image, excelling academically, and being a role model through making positive contributions to your community, as well as practicing benevolence.

4.1.1. Knowledge about self, culture and providing for one's family as indicator of intelligence.

On the question of how the research participant viewed intelligence, the research participant's individual views seemed to indicate that at the core of defining intelligence in their respective cultures was related to having a sense of self-awareness, and not forgetting where one came from. This according to the participants meant that a person understood who they were as individuals, as well as having knowledge about one's culture, values, and their immediate environment. According to the students, having such knowledge not only shows that one is intelligent, but also enables the individual to self-actualize and in turn be able to financially support oneself and one's family. This can be seen in the following extract where Bonga gives a detail explanation of what it means to be intelligent in his culture as a Black person:

Extract 1.

> Bonga: Mhm, specifically as a Black person, intelligence means understanding yourself first, understanding who you are, understanding your surroundings and to be able to develop yourself from there, to take care of your basic needs. When I talk about your basic needs, err, I'm talking about how to take care of your family, how to provide for yourself, how to be a humble person and how to understand other people. So, for me that I can describe as someone who is intelligent; I can include that without including the academic side for anything.

Bonga's response also seems to suggest that within Black South African culture people who are able to show a sense of understanding, courteousness, and cooperativeness in their interactions with others are regarded as intelligent. According to the research participants, this is because within their culture individuals who possesses such qualities are perceived to be still rooted in their cultural values. Hence, the fact that they still uphold their cultural proves that they are intelligent. This is because the act of upholding ones cultural values, showing understanding, and being financially supportive to one's family is an important cultural practice in Black South African culture. Hence individuals from these cultures are directly (and implicitly) taught these practices by their elders. This belief was indicated in the comments made by some of the students when there were questioned further on why they associate intelligence to supporting one's family and helping others. One example is reflected in extract 2 in the example given by Liwa about her mother. When she is probed on why she associates being intelligent with caring for one's family, Liwa gave the following response:

Extract 2

> Liwa: Well I was raised by a Black woman; being raised by a single mother who always strived and worked hard for our well-being, and I think that's intelligence. According to my culture is someone who is able to. Oh God! Yes, someone who is able to think for other people; to be selfless, in a way and to also be willing to give to others.

Liwa's answer clearly demonstrates that even though parents within Black South African cultures do not explicitly tell their children that providing for one's family is a tradition that one must maintain, and also an indicator of intelligence. However, individuals from these cultures grow up subconsciously knowing that such practice shows that a person is intelligent. Hence, individuals who provide for their families are considered selfless and thus wise or rather intelligent.

The student's views also suggested that providing for oneself, and especially one's family is the core defining feature of intelligence in Black South African cultures. Hence, a person who neglects financially responsibility to their family is not regarded intelligent. This is because such individuals are in a sense considered to have "forgotten who they are", and as a result, are viewed as "unwise" (used as a substitute for intelligence) people and are likened to the Bible's prodigal son (Luke: 15:11-32, English standard version), who when he had received money from his father flee away from his family, and thus became lost. This assertion is affirmed in extract 3, where Nhlanga elaborates about the importance of providing for one's family in relation to determining intelligence in his culture. He responds as follows:

Extract 3.

> Nhlanga: …you should grow and when you get a work you must not forget where you are coming from. So when you get work you must send money home so that they may improve some houses, those things, you know. So, if you are a particular person who does that, who let's say, you get a job here at Pietermaritzburg, but coming from Rivermond, but you can send money, we say that person is wise, because they don't forget where they are actually coming from…. According to our culture they will say that person is intelligent, is wise – *uhlakaniphilie* ((intelligent)) because *uyakwazi ukuthi akwenze* ((he is able to do it)), they don't act like a prodigal son, if you don't, they don't think that you are wise.

The views and examples given by the students above, especially the last statement by Nhlanga seem to indicate that even though there are various ways in which intelligence is conceptualised within the Black South African cultures (as it will be demonstrated in the following subsections), financially support to self and one's family is seen as the core defining feature of intelligence.

As a result, even though an individual may possess all of the other defining features of intelligence, if they don't financially support their family, they are likely to be regarded unintelligent. In fact, the participants comments seems to suggest that even though a person may not have all the other features that also indicate that one is intelligent, if they are able to provide for their family, they are still likely to be perceived to be intelligent by others as opposed to those who don't support their family. Hence, within the Black South African cultures you can be successful and possess all the other aspects considered to that make up an intelligent person. However, if you do not financially provide for your family you will be regarded unintelligent.

4.1.2 Living by example through making a positive contribution to your community.

In addition to financially supporting oneself and one's family, another feature identified as one of the aspects which determines that a person is intelligent in Black South African cultures, is being a role model for those who are around you, and by making positive contributions to your community. This is done by actively helping others reach their full potential, and through sharing any information, skill or resources that may possibly help them reach their goals in life. This can also be achieved through simply living your life in a manner which motivates others to also do good. This view is reflected in extract 4 where Liwa is asked to give an example of an individual she considers intelligent, and who is of use to his/her community. Liwa responded by saying the following:

Extract 4

> Liwa: "Yeah. [Chuckles] Okay, someone who is willing to teach. *Mangithi* ((when I say)) teach *ngisho ukuthi* ((I mean)) someone who lives a life, in a way, to set an example".

Hence, the student's views seems to suggest that within the Black South African cultures acts of service to others, whether it be with one's family (as discussed above) or to one's society is considered a very important feature of an intelligent person. According to the students, this is because in their culture individuals are responsible for each other's growth and wellbeing. Hence, when one individual achieve some level of success, they are sort of inescapably expected to also help others in their community achieve their goals. This is seen as way of giving back to one's community as it is also assumed that your community somehow also contributed to your success.

Hence, individuals are raised to grow up to be of service to others, and not just only to themselves or their families, but to every individual within their immediate environment, and society at large. This is some sort of implicit rule that individuals in Black South African cultures are expected to adhere to, and which also determines a person's intelligence. This belief is seen in extract 5 where Bonga clarifies on the importance of helping others in his culture, and why individuals are expected to help one another. Bonga responded by saying the following:

Extract 5.

> Bonga: So, in my culture we normally say it takes a village to raise a kid. So, as an adult your influence count a lot to building that society. So, when I talk about influence, I talk about you being responsible as a member of a community, it doesn't have to be a specific thing that you do for your family or for your house but for the whole society.

The student's responses also suggested that in their culture people who refuse to help others after they become successful are not respected, and they are perceived to be self-serving, and thus un-intelligent. This is because in their culture intelligence is associated with being in tune with your background. And being in tune with one's background means knowing that when you become successful you have to also help others succeed. Hence, if a person refuses, or neglect to help others, it means that they are no longer in tune with their roots, thus they cannot be regarded intelligent. This assumption can be noted in extract 6 where Nhlanga is asked about the relevance of helping others in relation to determining intelligence in individuals. His response was as follows:

Extract 6.

> Nhlanga: *Ya* ((yes)) you must provide for your family. You must be able to, you must not be selfish. *If kuwukuthi* ((ever)) you've got a line somewhere - a line of employment - you must call *abanye abantu* ((other community members)), and then they will be able to see you think of others. *Yah* ((yes)) you arise, you are not selfish. You don't, you do recognise the fact that by telling others that there are employment opportunities in your area won't get you unemployed. Those are one of the things that they, they usually look at. *Yes, ya* (yes).

Nhlanga's response above seems to suggest that social responsibility is one of the fundamental aspects of intelligence that people from Black South African cultures attribute to an intelligent individual. His response also supports the assumptions made by other participants that those who fail to help others are considered self-serving, and thus are not respected.

Hence, it seems that in Black South African cultures a person's sense of social responsibility along with helping one's family are considered key aspects of intelligence.

4.1.3. Respect for your elders and maintaining a good public image.

In addition to knowing one's culture, supporting your family, and having a sense of social responsibility as one of the defining features of intelligence in Black South African cultures. The research participant's views seems to also suggest that respect for others (especially one's elders) and maintaining a good public image are also other important aspects of intelligence in Black South African cultures. The students reported that within their culture, respect for yourself and others is also another aspect of intelligence which people use to determine whether a person is intelligent or not. They reported that a person who is intelligent in their culture is one who respects themselves and others. They emphasised that although respecting all people in general is an important trait in determining that a person is intelligent. However, the kind of respect which is associated with being intelligent is one mostly directed to one's elders. This is seen in extract 7 where Nhlanga is asked to comment about some of the aspects of intelligence in his culture. He responded by saying the following:

Extract 7.

> Nhlanga: *Ya* ((yes)), culturally you can be said to be intelligent if you, if you think sustainable. Maybe, if you do respect, especially the elders.

Nhlanga's response seems to suggest that in his culture, although it is important to respect all persons, respecting adults is considered more important, and thus counts in one being regarded intelligent. Moreover, the individual has to respect every elder that they interact with, regardless of whether that elder is that individual's relative or not. This is shown in extract 8 where Asanda is asked to make an example of someone who she believes possesses intelligence. She replied by saying the following:

Extract 8.

> Asanda: Okay. Number one, like, where I come from *yabo* ((you see)), like they would use the respect you have as a kid for adults as intelligence, that: "Oh! Yeah, she's intelligent because she respects and that.

Asanda's response clearly indicate that in Black South African culture adults tend to define a child who is respectful to his/her elders as intelligent, and hence anyone who does not show respect towards their elders cannot be regarded intelligent. To gain more clarity on this aspect of intelligence, participants were asked to give examples of an individual whom in their culture is considered to be respectful as it pertains to elders. The students explained that individual's level of respect is judged through their interactions with others, especially on how they behave or treat their elders. One research participant, Lihle in extract 9, made an example in which she explains that they often look at a person's manners.

Extract 9.

> Lihle: I'm sure the saying doesn't necessarily say that everything that an elder says you should do. But the thing of how you speak to your elders, how you interact with them that shows a level of maturity and intelligence within you… So, for instance the way you interact with people. So, let's say maybe you're like 30 years older than me, obviously like I can't be treating you like a 5-year-old, or dismissing you the way I would dismiss a 5-year-old. So, I think to a certain extent you have to treat your elders with a certain level of respect.

In addition to respect for oneself and one's elders, the students also reported that individuals also have to maintain a good reputation or rather public image if there are to be considered intelligent. They explained that those who maintain a good public image through their behaviour and mannerism are in turn respected by others in the community. And since they are respected by others due to their behaviour, they are in turn regarded intelligent. This is because they are perceived as possessing self-discipline, which is a quality which is also associated with being intelligent. Furthermore, the students also explained that maintaining a good public image is very important in being regarded intelligent person.

According to the research participants this is because having a good reputation is viewed as one of the qualities that separates intelligent people from those who are not. Students were then asked to describe some of the characteristics that they thought individuals with a good public image possessed. Most of the students mentioned being well dressed, well-mannered, and acting like a lady/ gentleman as one of the characters one would need to show in public. This can be seen in extract 10 in the example given by Anathi, when she is asked to define a gentleman in her words. She responded by giving the following answer.

Extract 10.

> Anathi: A gentleman would be those boys that don't stand on the streets, they don't smoke, they don't drink, and they have formal education. They go to work, they come back from work, they are of help around the community, and they take what they learnt at school and try to impact the community with it. So, that's the first one; it's how people present themselves, how people talk, how people carry themselves and I can't really say, it's how people dress, but it also could be, it's how you talk. The other one; it's your interpersonal relations with people. Err, another could be how people dress. How people dress, because another thing is; being from a rural town people aren't exposed to a lot of things, that's another problem. So, intelligence there is just seen as, what I'd say, it's being literate, and they go to a point that they say that, just because you are literate doesn't mean that you know how to deal with people, you know how to be around people. So, that is why I say that it could be those three factors.

Anathi response also shows that in Black South African cultures a person's public image is one of the ways which are used to differentiate intelligent individuals from those who are not. Her response also seems to suggest that in Black South African cultures, to be an intelligent person, you have to possess all of the aspects that make up intelligence. This means that missing even just one aspect of intelligence can lead to one being regarded unintelligent. This is also noted in extract 11 in a response by Nhlanga when he is asked about how intelligence is measured in his culture. His response was the following:

Extract 11.

> Nhlanga: … You know, *ya* ((yes)), but after having been, maybe let me say just because I'm doing Law, people are saying ay, you are intelligent and yes, you see. So after then looking at the fact that after I've graduated, okay I got the job and I'm not doing the right thing now, I'm just thinking money, girls, I'm, you know what I mean. I'm not taking care of my parents who did raise me, and then I will just, I will lose some sort of credit, you know. So as much as, in these days you, the academic one is given high credit, but they do need you to have some few cultural one, you know. So that you can be said to be fully intelligent, full one.

The research participants' response above shows that even though in Black South African cultures other aspects of intelligence are given credence, aspects of intelligence which are considered basic or cultural (such as respect and having a good reputation) ultimately determines whether you are perceived intelligent or not. His response also point out that in Black South African culture a person who is lacking in even just one of the basic/cultural aspects of intelligence cannot be considered fully intelligent. Hence, within these cultures, it is only those who possess all these aspects of intelligence that are regarded fully intelligent.

4.1.4 Academic excellence

Academic excellence was also one of the important aspects of intelligence reported to be important in defining an intelligent person. However, there were varying opinions regarding this aspect of intelligence. Some students felt that this aspect was not that important in determining intelligence, while some believed it was. Nonetheless, they all seemed to agree that having some level of education was important as it opens opportunities for an individual to self-actualize and to showcase their intelligence. However, the participants also believed that having no formal education does not mean that one is unintelligent but rather uneducated. The explanation for this viewpoint was that such individuals only lacked the academic aspect of intelligence. This is because in Black South African cultures intelligence is considered to be made of multiple aspects. This is seen in extract 12, in Anathi's response when she is asked to define what intelligence is. She replied by saying the following statement:

Extract 12.

> Anathi: Err, for me intelligence is how smart you are. That is how you project yourself in terms of literacy, yeah… A person who has never went to school, for me doesn't have a platform to show or to project their intelligence. So, other than saying they are not intelligent, I would say that they are illiterate.

The students further expounded that for one to be considered "academically" intelligent, they need to have received their qualifications merit. This is because within their culture it is believed that anyone can receive a qualification if they study hard, but only those who possess higher level of intelligence can obtain distinctions in their studies. Hence, those who are considered intelligent are those who achieve higher grades in their studies. This is seen in extract 13 in Sethu's response when she is asked to clarify her statement regarding academic achievements and intelligence, she responded this way:

Extract 13.

> Sethu: Well, considering like the education system; we've been taught that intelligence is the marks you get. So the higher marks you get you're perceived like intelligent.

Sethu's response above clearly demonstrate and support the assertion that in Black South African cultures, not all those who are educated are considered intelligent, but only those who have received their qualifications with merits are classified as such.

Moreover, in relation to the participant's views on being educated and illiterate. They also reported that even though in their culture they recognize that intelligence is not just about academic achievement, and therefore unlikely to immediately think of an illiterate person as unintelligent. They pointed out that since education is regarded as one of the major aspects of intelligence in their culture. An individual who is educated but maybe lacking in some aspects of intelligence might be in a better position of being regarded intelligent than someone who possess most of the aspects of intelligent but is illiterate. This view then suggests that in Black South African cultures you are more likely to be regarded intelligent based on your academic achievements alone.

This is because in these cultures there is an inherent assumption that one cannot reach high level of academic study if they are not intelligent. Hence their views seems to suggest that in Black South African cultures being educated alone is seen as an indicator of possessing some high level of intelligence.

This belief is supported by the fact that the students also mentioned that people who are uneducated have to work very hard to prove their intelligence to others. Such individuals are also reported to be often stigmatised for not having formal education. Hence, the students reported that uneducated people need to possess some type of talent, skill, or knowledge that they can showcase, or use to "prove" that they are indeed intelligent. An example of this is seen in extract 14, where Tinyiko describe an elder in his village who is uneducated, but who is respected as he possess some cultural knowledge and history of the African culture. The knowledge that this elder possess is considered to be very significant for the community, especially when people in the community have to perform cultural ceremonies. He says the following:

Extract 14.

> Tinyiko: I think it's like that everywhere, if you have the education, you get respect, and if you don't have the education, you don't get much respect, but there are people we look up to. Like this dude has worked so much to be there. So those people have much respect because of their intelligence, because when they speak people listen, like when there's a ceremony or function, they call this guy we need him to come speak here. The guy's not as educated as others but whenever he speak, they listen. So, so I guess it's just wisdom or he's smart in something. Maybe he's just not into education.

Tinyiko's response evidently illustrates that in Black South African cultures, people who do not have any formal education have to work very hard to prove to others that they are intelligent. And that, people who are educated are afforded more respect, and do not have to prove that they are intelligent. This then suggests that in Black South African cultures a person who is formally educated is unquestionably perceived to be intelligent. However it is also important to remember as discussed in the previous sections, that in Black South African cultures intelligence is greatly measured by looking at a person's sense of responsibility to their family and community in general.

Hence, as reported earlier by the research participants, for a person to be "fully" considered intelligent, it is important that they must at least possess more or all of the aspects that make up intelligence. Thus, if they don't possess most or all of these aspects, they are likely to be regarded as just smart in that one area of intelligence.

4.2. Factors influencing conceptualisations of intelligence.

The second theme was aimed at exploring and answering the second research question which explored whether the student's cultural background had an influence on how they conceptualise intelligence. The study found that there were 2 main factors that influenced how the students conceptualised intelligence, these factors included family upbringing, and culture. Some students also mentioned that to some extent formal education also influenced how they conceptualisation intelligence.

Most of the students in the study reported that their understanding and definitions of intelligence was mostly influenced by their culture as well as their family values. They reported that in Black South African culture, systems of thoughts and beliefs are generally adopted from parents or elders as they are viewed as custodians of knowledge and wisdom. This is because parents or elders are considered to have walked through many paths in life which afforded them with the wisdom that they can share with younger generations. This assumption in noted in extract 15 where Bonga is asked what influenced his conceptualisation of intelligence. He responded by saying the following:

Extract 15.

> Bonga: In my culture we have this saying which says *Indlela ibuzwa kwaba phambili*, which simply means we look up to those who are ahead of us for guidance and directions. So, in that way for someone to be intelligent, for us you have to be someone who's learning from those who have managed to succeed or to be successful; and people who have influence or who are considered as people who are intelligent. So, that's how you also learn and also being able to accumulate your own intelligence from those people.

Bonga's response seems to also suggest that in Black South African culture, those who have gained some level of success in life play an important role in helping those who need guidance in order to also succeed in life. Thus, those who are older are expected to provide guidance and council to those who are inexperienced in life. Hence, looking up to those who are regarded intelligent is very important in Black South African culture because it is considered the most effective way to developing one's intelligence. Thus, most of the students reported that their cultural values and beliefs has a large influence on how they conceptualise intelligence.

The students also reported that family values and upbringing also played a huge role on how they have now come to understand intelligence. They reported that by witnessing their elders heed and do what was right and required of them, they too, indirectly learned a lot about intelligence. They also added that some of these lessons were also learned through being directly told and guided on what they needed to do to develop their intelligence. This included being directly told how to behave and present themselves publicly and being encouraged to go to school. And as their parents/elders taught them about these behaviours they adopted them and used them to determine intelligent behaviours in themselves and others. This can be seen in extract 16 where Tinyiko explains what influences his conceptions of intelligence.

Extract 16

> Tinyiko: It does influence your intelligence, as people surround us, we look up to our fathers our mothers and whatever they are doing. We observe whatever they are doing in the community. So, when you are growing up, you look up to them, and then unconsciously it just gets into you.

Another participant, Bonga added to this by saying the following:

Extract 17

> Bonga: There is a big influence. Err, when I say there is a big influence, my understanding of intelligence will have to do with everything from where I come from. From how I was raised, so like in my family we believe in education, educating ourselves, err, developing ourselves and we also believe in respecting everyone, being humble all the time. So for me intelligence has everything to do with how I was raised and where I'm from. Yes.

Bonga's response above clearly indicate that in Black South African culture an individual's family plays an important role in how they conceptualise intelligence. His response also suggests that families in Black South African cultures directly and indirectly (through modelling behaviour) teach individuals what intelligence is. His response also shows that families also help the individual understand and develop healthy habits that are considered important in cultivating their intelligence. Hence, in Black South African cultures, an individual's family is not seen as just the most influential basis for conceptualising intelligence, but also important for the basis of developing their intelligence.

4.3 Determining intelligence.

The third theme focused on exploring how intelligence is determined in Black South African cultures. The study found that intelligence is determined through observing an individual's behaviour, and thereafter evaluating whether that individual possesses and display specific characteristics that are associated with being intelligent. This essentially means that in Black South African culture intelligence is measured by evaluating if one possesses all the different aspects of intelligence which have been already discussed in the previous section. For instance, in extract 18, Bonga explains how intelligence is determined in his culture.

Extract 18.

> Bonga: Err, in my culture the way we measure intelligence might differ from other cultures and other people. Err, firstly, if a person is intelligence, according to my culture, you have to be able to be a good example in the public, in the society. You have to be having like a positive influence in the society and you also have to be someone who is able to take care of his family or being able to provide for your family and being without any harm or any other activities which can harm other people or something like that. So, you need to be someone who is straight, someone who's able to show some understanding and being able to work together with other people. So, in that way we say you are intelligent.

Tinyiko's statement in extract 19 also seems to also support Bonga's sentiments regarding how intelligence is determined in Black South African cultures. In the following extract, Tinyiko state that within his culture intelligence is determined through observing how an individual's carry him/herself publicly.

Extract 19

> Tinyiko: Yeah, its morality, dignity, and the way they speak, the way they perceives themselves, the way they handle pressure and everything. Because when it comes to my place, everything comes with pressure, people who come up to you and say, "There is something like this", "we need to do something like this", how you handle that. Sometimes as a young person, so, we just chilling around watching soccer or we are doing something, you can tell this is dude is intelligent from the way they are speaking about soccer.

The results from the discussions show that in Black South African cultures there is currently no formal method of determining intelligence as observed in Western culture. Hence, determining intelligence is currently done using subjective means such as observing a person's behaviour, and subsequently deciding if the person in question has some most of the aspects of intelligence or not.

4.4 Nature of intelligence and factors believed to cultivate intelligence.

The 4th theme explored the student's beliefs about the nature of intelligence. This theme was explored in order to gain more clarity on how intelligence is conceptualised in Black South African cultures. And the results from the discussions suggests that most of the students believe that intelligence is the result of both hereditary and environmental factors. The students are of the view that intelligence can be inherited from one's parents, and that it can also be the result of environmental factors such as growing up in home or neighbourhood that fosters its development. This can be seen in extract 20 in the statement made by Tinyiko when he was asked to elaborate on his beliefs about the nature of intelligent. He responded by saying the following:

Extract 20.

> Tinyiko: When it comes to intelligence, sometimes it's, err, influence by the environment, sometimes it's genetics that determines your intelligence. So there are people who are born in harsh environments and then you see them making it in life, and then you question how so, because they were in the same situations. So, it's mostly your genetics and your influence by the environment. Also, there are people who are not actually born intelligent, but their environment is good, like they go to good schools, they and then now they observe all of that, and then you find that now they do well in their academics. And now you have people who are just gifted in their genetics, they are doing well in their harsh environment. They don't have time for studying because now someone is playing a radio by their neighbours, they can't even study. They have to come back from school, they have to cook for few hours and walk long distances to school, and then when you go to school those same people are the ones who are doing better.

Tinyiko's response seems to indicate in Black South African cultures intelligence is believed to be the result of both the environment as well as genetic factors. However, his response also seem to suggest that environmental factors are believed to be more responsible for the nurturing of intelligence than genetic factors. This belief is also noted in extract 21 where Bonga talk about the beliefs surrounding the nature of intelligence in his culture. He reported that in his culture they believe

that intelligence is not something you are necessarily born with but something that an individual can develop over time through engaging in activities that fosters it.

Extract 21.

> Bonga: Err, it's not something you are born with. In my culture intelligence is something you can accumulate over time and it's something that you can learn from the people that you associate yourself with. If you associate yourself with people who are intelligent and willing to also learn from them, you can learn a lot about yourself by leaning from other people. Yes, it's something that you learn, because it also has to do with how you were raised. Which is why I said before, for me, intelligence it has to do with how you were raised.

The students views seems to also point out that in Black South African cultures intelligence is believed to be something that has a potential to be developed over time, rather than something that one is born with. However, its development is largely believed to be depended on the individual's efforts and the environment. This means that, in these cultures, even though one can have parents who are regarded unintelligent, with self-determination, hard work, and good social support they can be able to develop their intelligence. On the other hand, it is also believed that even though one may have parents who are intelligent, if they themselves do not take the effort to develop their own intelligence, they might fail to succeed in life.

This then suggest that in Black South African cultures intelligence is viewed as mainly the product of both a good social environment and the individual's efforts. Hence, although genetics are also considered to play a role in a person's intelligence. This role is seen as very small compared to environmental factors, and the person's efforts. The student's also gave several examples that people in their culture use to develop intelligence. These included, constant pursuit to gain knowledge through reading, being open to new information, and to perspectives that are different to oneself. One of the participants said the following when asked to give an example of how one can develop their intelligence:

Extract 22.

> Anathi: It's to read, reading things that are on a higher level than what you are used to, and it's also being open to new things, like you expose yourself. There's social media now, digital media which is easier to access because if ever you are going to rely on libraries, textbooks and all those things, those don't get updated too often than things that you find digitally. So, I would say that a person has to read current things, read things that are on a higher level than what they are used to and teach yourself writing because the more you write the more you get used to things. Also challenge yourself daily to try new things.

Other students supported Anathi's view by adding that another way people are able to develop their intelligence in their culture is through associating oneself with individual who are perceived to be intelligent. This applies especially to those individuals who hold different views or are in a different field of study than oneself. This is viewed to be the best way a person can develop their intelligence. This is because it is assumed that the individual will get to learn first-hand from those who are believed to be intelligent. Associating oneself with individuals who are regarded intelligent is also believed to help one avoid consorting with people that can negatively influence them (which might then negatively affect the development of their intelligence). This view can be seen in Bonga's response when he is asked to give an example on how one can develop their intelligence. He responds by saying the following:

Extract 22.

> Bonga: So, the example I can say, reading books is one of the ways you can accumulate your intelligence. Err, connecting with people who are successful in different platforms, not just in one stream or in one direction, in different streams. You can even learn something you are not doing, maybe you are not studying in school. So, connecting with those different people, people who are already working people, who own businesses. You learn a lot from them, so in that way you develop mentally, and it also develop you.
>
> Like makes you a strong person, to be able to survive, give you guidance on how you can live. So in that, those are the examples I think of it.

From looking at the students views on developing intelligence; it is clear that in Black South African cultures intelligence is strongly believed to be resulting from one's effort and the constant desire to develop it. It is also believed that although one can possess it from birth, such cases are rare, and also not good enough if one wants to reach their highest potential. Hence, the development of intelligence is considered to be largely dependent on constant learning through self-study, and learning through those who have already succeeded in an area which an individual also wants to succeed in.

4.5 Conclusion

This chapter focused on the findings of this study, we paid special attention to how the students conceptualise and determine intelligence within their culture. This chapter also looked at factors that the students believe influenced their conceptualisations of intelligence, as well as those affecting its development. We explored that in the Black South African cultures, intelligence is believed to be made up of several aspects, which includes knowledge about oneself and one's culture, being a positive influence in society, being respectful to one's elders, academic excellence and most importantly the ability to financially support one's family. Factors such as culture, and family background were identified as the most significant factors which influence the conceptualisations intelligence in Black South African cultures. The chapter ended by reporting on the student's thoughts about the nature of intelligence. We explored that the students believe that hereditary, and environmental factors are the most important factors that are considered responsible for the development of intelligence in their culture. In the next chapter we will move on to discuss the findings of this study.

CHAPTER 5: DISCUSSION

5.1 Introduction.

The main aim of this study was to explore and understand how Black South African students from UKZN, Pietermaritzburg Campus conceptualise intelligence within their culture. This study also intended to explore if the student's culture have an influence on how they conceptualise intelligence. And lastly the current study also wanted to explore how the students determined intelligence in themselves and others within the context of their culture. The need to conduct this study arose from the recognition that there are very few studies conducted on this subject within the South African context. And since earlier studies on this topic had indicated that intelligence is a social construct which cannot be understood outside of an individual's culture (Sternberg, 2004). The author believed that conducting this study could help the field of psychology in South Africa to gain a better understanding of how people from Black South African culture conceptualise intelligence.

This section will discuss the results of the current study which were presented in the previous chapter. The results will be interpreted from a social constructionist perspective. The social constructionist approach which is based on the belief that human experience and reality is a product of social and interpersonal interactions (Gergen, 1985). Assumes that the knowledge we have about concepts is created through social interpretation, and influence of language, culture, and family (Hoffman, 1990). And as we have already explored in the literature review chapter, a person's culture has both an indirect and direct influence on an individual's perceptual, cognitive, personality and social processes. Hence, culture determines how individuals construct and determine intelligence as it regulates and represents every aspect of the individual's life within a specific group (Cocodia, 2014). Thus, based on this knowledge, and that intelligence is social construct (Sternberg, 2014). This study then adopted a social constructionist approach in order to explore how the Black South African students from UKZN, Pietermaritzburg Campus conceptualised and determined intelligence in their culture. This approach enabled this study to explore the student's conceptions of intelligence from their personal and socio-cultural viewpoint.

Hence, the current study was able to capture the student's notions of intelligence from a relativist position, rather than on a generic or universal basis. This study was guided by the following three research questions:

1. How do Black South African students from UKZN, Pietermaritzburg Campus conceptualise intelligence?
2. How do Black South African students from UKZN, Pietermaritzburg Campus determine that a person is intelligent?
3. Do cultural beliefs have an influence on how Black South African students from UKZN, Pietermaritzburg Campus conceptualise intelligence?

The discussion will be divided into three main sections, section 1 will discuss the student's conceptions of the nature of intelligence, and their conceptualisation of intelligence. Section 2 will discussion the factors influencing how the students conceptualise intelligence, and the last section will discuss how the students determine intelligence in themselves and others.

Section 1:

5.2 Student's conceptions of the nature of intelligence, and conceptualisations of intelligence

We have already established in the previous chapters that intelligence is a complex psychological construct, hence, to fully understand it we need to look at many facets that leads to its construction within the context that it is constructed. As a result, for the current study it was anticipated that in order to fully understand the student's conceptualisations of intelligence, we first needed to explore their beliefs or their conceptions of the nature of intelligence. Hence, this section will be discussed in two parts. The first part is dedicated on discussing the student's notions of the nature of intelligence, and the second part will discuss their conceptualisations of intelligence.

5.2.1 Student's conceptions of the nature of intelligence

Early studies on the nature of intelligence (Herrnstein, 1973; Jenson, 1969) have indicated that about 80 % of human intelligence is a result of hereditary factors.

However, modern theorists (Garner, 1983; Sternberg, 2004) seem to agree that intelligence is a result of both hereditary and non-hereditary factors. It is posited that even though hereditary factors do play a major role in the development of intelligence, various factors such as an individual's age, occupation, life experience and culture also plays a significant role in its development. Hence current literature on human intelligence seems to indicate that intelligence is product of both genetic and environmental predispositions (Gheorghe, 2010).

The findings of the present study also showed that the Black South African students in this study also believe that intelligence is influenced by both hereditary and environmental factors. However, the results of this study varied slightly from the results reported in previous literature. The current study found that, although the students perceived both hereditary, and environmental factors to be significant in determining an individual's intelligence. The students in this study tended to view environmental factors as being more influential and important than hereditary factors. Hence, within their culture, the general belief is that an individual's intelligence is mainly depended on socio-economic conditions such as growing up in a financially stable home and having access to resources that help foster its development. Resources that help foster the development of intelligence are reported to include access to high quality education, being linked to people that are successful in a specific field that the subject also wishes to be accomplished in and having access to new technological inventions that one can use to advance themselves.

The results also showed that within the students' cultures the nature of intelligence is viewed as something that an individual can develop over time. Thus, the students believe that even if an individual's parents or relatives are not intelligent, the individual can still develop their intelligence through their own actions and efforts. The efforts that one can make in order to develop their intelligence is believed to include constantly seeking people, and situations that help the individual achieve personal goals, and through seeking knowledge that is necessary to achieve these goals. This could be in the form of reading books or asking people who are knowledgeable in the subject of interest.

Hence, through this process of seeking knowledge and learning the individual becomes knowledgeable about different subjects that in turn help him/her develop his intelligence and succeed in life, and as a result escaping the fate that his parents had.

It is the author's impression that this belief suggest that in the students' cultures, intelligence is perceived to be largely depended on the individual's efforts more than both hereditary and environmental predisposition. This means that hereditary and environmental factors are seen as factors that can potentially help the individual develop their intelligence. However, the most determinant factor of whether they do actually develop it or not is seen as dependant on the individual's actions and determination. Consequently, the student's views seem to suggest that being unintelligent in Black South African cultures is seen as resulting from a lack of determination in taking steps that will help one develop his/her own intelligence. Hence, the author is of the view that in Black South African culture individuals are most likely to be blamed for lacking intelligence since the general belief is that everyone has the potential to develop their intelligence if they put enough effort towards developing it. This assumption is indicated in the research participant's belief in that, having intelligent parents and access to resources (that help foster intelligence) does not guarantee that one will be intelligent or successful in life. It is rather believed that an individual will only be able to develop their intelligence if they choose to make use of these resources through taking steps that will help them develop their intelligence. An example made by one participant is a situation whereby an individual comes from a financially wealthy family, and thus has all the resources they need to accomplish everything they want in life, but somehow the individual end up failing to making something out of themselves. According to the research participants, such individuals are proof that genetics (assuming that the individual parents were intelligent since they were able to build wealth), and access to resources alone do not guarantee that one will best develop their intelligence. Hence, in Black South African cultures the success at developing one's intelligence is seen as largely dependent on the actions that one takes to develop it. This assumption then seems to suggest that in addition to hereditary and environmental factors, the individual also needs to be active in ensuring that they develop their own intelligence. Hence, the findings of this study suggest that the nature of intelligence in these students' culture is understood to be fostered by both hereditary and environmental influences. However, the individual willingness and efforts in developing it, is seen as the most important factor.

These findings are to some degree similar to studies conducted on the nature of intelligence in other contests (Leahy, 1935; Jenson, 1969; Herrnstein, 1973). However within the Black South African cultures there is an additional emphasis on the individual's efforts as playing a key role in the development of intelligence. Meaning that as much as the other two factors are considered important in the development of intelligence, the individual's actions and efforts are seen as the ultimate determinant. This assumption is dominant to the extent where it is believed that the other factors alone will not enable the individual to develop their intelligence if they themselves do not take the necessary steps at ensuring that they develop their intelligence. Hence, it is the author's impression that in Black South African cultures, hereditary and environmental factors are regarded as *assistive devices* that only serve as a foundation that will help the individual develop their intelligence. This means that these factors are viewed as only serving to make it easy for the individual to develop their intelligence. However, it is important to note that this does not suggest that these factors are not significant, in fact, in their absence the individual's actions and efforts to develop intelligent becomes ineffective. This is because the success of the individual's actions is dependent on these factors.

A good example to illustrate the above point, is a situation whereby an individual is born with a genetic learning disorder (hereditary factor), and thus needed to obtain high quality education (environmental factor) for people with learning disabilities, but possibly due to financial constraints is unable to receive such education. As a consequence of unfavourably hereditary (genetic learning disability) and environmental (lack of access to high quality education due to finances) factors such individual would be unlikely to easily develop his/her intelligence despite his/her efforts. Hence, even though the person's efforts is viewed as the most important factor in developing intelligence, the success of the person's efforts in developing intelligence are heavily dependent on hereditary and environmental factors. This is because in the absence these factors it makes it very hard for the individual to succeed at developing their intelligence as these factors sort of *assist* the individual's efforts. Hence, these factors are co-dependent on one another to help the individuals develop their intelligence.

Within the social constructionists approach these findings can be attributed to the role of cultural values and beliefs systems in the construction of reality and knowledge. African cultures are well known for being collective and founded on the spirit of *Ubuntu*, which constructs the "self" as intertwined with the world (Idang, 2014). Hence, people from African cultures tend to construct reality as not separate from the natural and social environment, as well as oneself. African cultures also acknowledges that as human beings we are the product of our ancestors (Idang, 2014), and thus carry their genetic makeup within us. Additionally, within African cultures it is believed that an individual's survival is dependent on working with others within his/her her immediate environment (Nsamenang, 2006). This is best articulated in the African-Nguni proverb which states that, "*Umuntu ngumuntu ngabantu"*, this translates to, a person is a person through other people. Moreover, African cultures also stresses importance on individual hard work and responsibility as this is believed to lead to collective progress and empowerment (Idang. 2014). Hence, although it is believed that one needs others to achieve personal goals, it is also believed that the individual also needs to work hard and put effort in achieving their personal goals. This is because in African cultures it is believed that one cannot become successful in life by sitting and doing nothing. This belief is reflected in the African expression which says, *"Ayikho inkomo yobuthongo",* which means you cannot sleep and do nothing but expect progress in life. Thus, people from African cultures believe that as much as others are there to help a person, the individual needs to also put in the effort and work hard to reach personal goals which will then ultimately lead to reaching collective or social goals.

These cultural beliefs and constructs about how one must go about achieving success among people of African descent seems to help explain why the research participants in this study believe that the development of intelligence is largely depended on both hereditary and environmental factors. An explanation of this can be attributed to the fact that in their culture it is inherently recognized that a person is a product of both his parents (due to genetics) and the social environment (the recognition that one cannot be without others). And since this the student's core cultural belief about the nature of people and things, this then helps explain why they also construct the concept of intelligence along hereditary and socio-environmental lines. This is because within their culture both personal and collective success is constructed as resulting from the interaction of the natural and social environment. Moreover, within these students culture it is also recognized that

for the betterment of oneself and his/her society, a person has to have goals to succeed in life, and more importantly put in the necessary efforts to ensure that his/her goals come into realisation. This belief best explains why the students also place a huge emphasis on the role that the individual him/herself must play in ensuring that they develop their own intelligence. This then seems to support dominant literature which asserts that socio-cultural beliefs have an influence on how intelligence is conceptualised, and thus differ from one culture to another (Sternberg, 2004; Nsamenang, 2006; Cocodia, 2014). The following sub-section will discuss conceptions of intelligence within Black South African cultures.

5.2.2 Conceptualisations of intelligence.

In the literature review section we established that there is a need to study intelligence within the context of culture since it culturally, and context dependant (Cocodia, 2014). Hence prominent researchers have called for intelligence to be defined as the combination of skills and abilities which a particular group or culture uses for survival and advancement, and only be defined as intelligence only within that specific culture (Anastasi, 1992). We also establish that intelligence is not unitary but composed of multiple aspects, which means that there are many aspects that make up intelligence. These aspects of intelligence often include analytical intelligence, creative intelligence, and practical intelligence. Hence, these aspects or types of intelligence are thought to be the most important in helping individuals to achieve world success (Sternberg, 2012). Consequently, intelligence has now come to be defined as, "… the ability to achieve one's goals in life, given one's sociocultural context by capitalizing on the strengths and correcting or compensating for weaknesses in order to adapt to, shape, and select environments through a combination of analytical, creative, and practical abilities" (Sternberg, 2005, p.1).

In the current study the findings revealed that Black South African students also consider intelligence to be multifaceted. This means that these students believe that there are multiple aspects that make up intelligence. And that for an individual to be considered fully intelligent, they must possess at least most if not all of these aspects.

As previously outlined in the results section, aspects which the students identified as the most important features of intelligence included, 1) having a high sense of self-awareness and knowledge about ones family, as well as one's cultural background, 2) being able to financially provide for one's family, 3) having respect for oneself and others, especially one's elders, 4) maintaining a good public image, 5) excelling academically, 6) being a role model through making positive contributions to one's community, and 7) practicing compassion for others. Other aspects which were also identified as important features of intelligence, included having the ability to adapt to environmental challenges, and recognising opportunities that could lead to one's success.

The findings in this current study appears to be consistent with results from other research conducted among people of African descent in other contests (Grigorenko et al, 2001; Serpell, 1974; Super, 1982). For example, a study by Grigorenko et al. (2001) which was conducted among the Luo people of Eastern Africa also found that most people from this culture identified academic excellence and social attributes such as respect, consideration, and responsibility as one of the main aspects of intelligence. Another study by Serpell and Folotiya (2008) which was conducted in Africa among Chewa people of Zambia also identified factors such as wisdom and social responsibility as some of the main aspects of intelligence within their culture.

The findings in the current study may be best explained by considering the students cultural notions of the nature of intelligence. As previously explored in the above section, "…African societies tend to view intelligence as inclusive of all social relationships" (Cocodia, 2014, p. 9). Social relationships in African communities are considered important since they help foster the collective nature of African cultures (Idang, 2014). Thus, it makes sense that most of the aspects identified as important aspects of intelligence in the student's culture are aspects that are mostly related to social competence. Hence, it is the author's impression that the reason the students identified and regarded these aspects as important features of intelligence is because in Black South African cultures these aspects are highly valued. This is because these aspects play a big role in ensuring that the social relations (which are considered important in maintaining collaborative relations) are not severed, and thus bringing disharmony among its members.

These aspects are also important because they help in ensuring that the essence and nature of African culture is preserved. Hence, this support Anastasi's (1992) social constructionist view in that intelligence should be regarded as a set of abilities which are used for survival and development within a specific culture or group.

An important feature of these results is that even though most of the identified aspects are considered to be important features of intelligence. Aspects such as financially providing for one's family, showing respect to one's elders, and being a role model to others are rated as being more important in determining intelligence than all the other aspects. These findings are in contrast to results found among people from Western cultures (Faria & Fontaine, 1997; Sternberg, Conway, Ketron, & Bernstein, 1981). Studies conducted in Western contests found that individuals from these cultures tend to rate practical and cognitive skills such as problem solving, and abstract reasoning as the most important aspects of intelligence (Sternberg, 2004). This could be attributed to the fact that Western cultures are highly characterised by being individualist and competitive in nature; and thus are driven by the need to constantly evolve and adapt to their ever-changing environment. And as a result, skills related to communication, abstract reasoning and problem-solving are considered important since they facilitate adaptation and survival to such environments (Cocodia, 2014).

From a social constructionist's view, these findings can be attributed to the difference in cultural values and beliefs about the nature of intelligence between people from African and Western cultures. Since individuals from Black South African cultures have different cultural values and belief systems to individual from Western cultures, their notions of intelligence will not be the same. This is because culture informs what we consider to be an intelligent behaviour (Sternberg, 2004). And since the students in this study are from Black South African cultures (which are generally known for valuing collaborative relationships), it is the authors impression that the students identified aspects related to social responsibility as indicators of intelligence because these aspects considered important in their culture as they help preserve the collective and collaborative nature of African societies. On the other hand, individuals from Western cultures are reported to identify practical skills over social responsibility because these skills are viewed as important for adapting to the individualistic nature of Western cultures.

These findings thus also seem to support the assertion that people's notions of intelligence are linked to their cultural values and beliefs, and that to fully understand intelligence we need to study it from a cultural context (Sternberg, 2004).

Another important feature of these findings is that, although there was a general consensus in that aspects such as respect, and financial provision to one's family are very important aspects of intelligence. However, the author noted that students from rural areas were more inclined to this belief than those from semi-urban and urban areas. Students who identified as coming from semi-urban/urban (Townships/Suburbs) areas tended to rate academic excellence as the most important indicator of intelligence. Moreover, in terms of financial provision, unlike their rural counterparts they attributed this to supporting oneself and immediate family rather than extended family members. The author attributes this disparity to the fact that the Black South African students from semi-urban/urban areas are more exposed to Western cultural way of living than they are exposed to Black South African culture. Hence, they identify more with Western cultural notions of intelligence than they do with the Black South African Cultural notions of intelligence. On the other hand the Black South African students from rural areas are more in tune with Black cultural notions of intelligence because they have not been exposed to Western cultural notions intelligence since they grew up in rural areas which are not influenced by Western culture. This disparity in views among the students seems to suggest that other Black South African's notions of intelligence are not entirely influenced by African cultural beliefs and values. But are sometimes influenced by Western values, and this is associated with living in areas which does not fully embrace African cultural values. Hence, it is very important to not assume that all Black South African's notions of intelligence are founded in African cultural values, as this is not always the case. Moreover, this also suggest that even though most Black South African people hold similar views of intelligence, it is important to realize that some also have notions which are different to those held by the majority. Thus, there is a need to also explore factors which influence conceptions of intelligence as they directly inform their notions of intelligence.

The following section discusses some of these factors in great detail.

Section 2.

5.3 Factors influencing conceptualisations of intelligence.

In the current study, there were two main factors that the students identified as playing a major role on how intelligence is conceptualised in Black South Africans cultures. This included an individual's family upbringing and their culture. However, some students also reported that to some extent formal education also had an influence on how they conceptualised intelligence.

An interesting feature of these findings is that, although the students reported that their conceptualisations of intelligence is largely influenced by their family values/upbringing and culture. However, most of them reported that this is not directly taught to them but learned through observing cultural values and their elders/parent's behaviour. They then adopt these cultural values and behaviours from their parents and embrace them as their own. This is because in Black South African cultures, it is believed that wisdom (in this context used interchangeably with intelligence) is only possessed by those who are older in years (or have achieved some form success in life) since they are perceived as having been through many situations in life that gave them experience and knowledge to help themselves, and thus other's. This belief is clearly articulated in the African saying quoted by one of the students in the results section. The saying states that, "*Indlela ibuzwa kwaba phambili",* meaning guidance is sought from those who have walked the path. Hence, it is the authors view that conceptualisations of intelligence in Black South African cultures are implicitly learned through observing cultural values and the behaviour of those who are in the position of influence.

This aspect of these findings seems to support the social constructionist's view, which asserts that our understanding of the world is a direct result of a historical process of interaction and negotiation between groups of individuals (Galbin, 2014). And that it is within this process of our interactions that we as individuals produce, over time concepts of each other's actions. We then adopt these concepts into shared roles, and then play them in relation to one another. And later these roles are adopted by other people in society, and these shared interactions are then institutionalised.

It is thus in this course of institutionalisation that meaning or what we consider to be true becomes embedded in societies and cultures. Hence the social constructionists understanding of what influences conceptions of intelligence within Black South African cultures could be interpreted as having been adopted through social interaction.

Regarding education being one of the factors that influence conceptualisations of intelligence in Black South African culture. The author noted that although most of the students reported that their educational background had an influence on how they conceptualised intelligence. This view was mostly held by students from semi-urban/urban areas than by students who were from rural areas. Students from semi-urban/urban areas tended to associate their conceptualisation of intelligence to formal education than with culture. On the contrary, students from rural areas mainly associated their conceptualisation of intelligence to their culture and family upbringing, and less more on formal education. The disparity in views among the students can again be explained in terms of their socio-cultural backgrounds. Even though the students in the study are all Black South Africans and mostly identify themselves with being African. It is the author's impression that the students who grew up in semi-urban/urban settings were raised in settings which are more likely to be influenced by Western culture, and as a consequence they were more likely to have been raised with ethos which are influenced by both African and Western values. And since in Western culture the education system plays a key role in reinforcing people's beliefs systems (Meyer, 1977). This then helps explain why the students raised in semi-urban/urban areas feel that education plays a key role in informing their beliefs about intelligence than their own culture does.

The differences in views on what the students consider to be the main factors that influences their conceptions of intelligence is very important. This is because it shows that even people from the same culture can also have different notions of intelligence. It also shows that although culture plays a key role in influencing people's conceptions of intelligence, but other factors such as education also do affect how people conceptualise intelligence. Hence, these findings seems to support the view which asserts that notions of intelligence can sometimes vary even among people who are from the same culture. This is because notions of intelligence are also based on our personal experiences within our socio-cultural environment (Cocodia, 2014).

Hence, this shows that it is possible for people who come from the same culture to hold different views about what an intelligent behaviour is. This particular point is very important to keep in mind as we move on to the following section which discusses how the students in this study determine an intelligent behaviour in their culture.

5.4 Determining intelligence in others and oneself.

In the previous section we explored that our conceptualisations of intelligence, and the factors influencing our conceptions of intelligence ultimately informs how we determine it. Hence, notions of what is regarded an intelligent behaviour guide how people determine intelligence in themselves and others. The current study indicated that there is currently no formal means for determining intelligence in Black South African cultures as it is observed in Western cultures through the use of IQ tests. However, the study found that people in Black South African cultures determine intelligence through observing an individual's behaviour, and then from this judge if the individual do possess some of the aspects that are considered to be important features of intelligence. If the individual is found to be possessing these aspects, then they are regarded intelligent, but if they don't possess them, it is concluded that they are not.

We have already discussed that within Black South African cultures aspects such as social and family responsibility are at the core of defining intelligence. This was reflected in our findings which showed that students from Black South African cultures consider aspects such as respect, financial provision to one's family, and being an example in your community as the main features of intelligence. Hence, these aspects are used as a foundation for determining intelligence in individuals.

The results from this study thus appear to be consistent with other studies conducted among people of African descent (Irvine, 1988; Mpofu, 1993; Wober, 1974). For example, in a study about what it means to be intelligent in Zimbabwe, Mpofu (2004) found that people associated being intelligent with social responsibility, wisdom, and educational qualifications, moreover, his study showed that people from this culture believed that a person's intelligence must serve a laudatory social purpose.

This means that in African cultures, an individual cannot be fully considered intelligent if their intelligence or success does not benefit his/her community. Hence, in African cultures the true determining factor of intelligence is family, and social responsibility. This means that even if one can be intelligent or successful in life, but if their intellect or success does not benefit his/her fellow men he/she will not be viewed as a fully intelligent person. This is because being intelligent in African culture means being able to be also of service to others in society. This belief seems to come from the African cultural belief about the nature of being, which asserts that one cannot be without others. Hence, it is the author's impression that in relation to intelligence and success, this cultural belief manifests through believing that an intelligent/successful person cannot live a comfortable and successful life while he watches his fellow man struggle in life. Thus, the successful individual is expected to help others become successful just like him/her. This belief was alluded in the current study, and can be seen in one of the student's response quoted in extract 6 in the results section, the student said the following:

> Nhlanga: *Ya* ((yes)) you must provide for your family. You must be able to, you must not be selfish. If *kuwukuthi* ((ever)) you've got a line somewhere - a line of employment - you must call *abanye abantu* ((other people)), and then they will be able to see you think of others. *Ya* ((yes)) you arise, you are not selfish. You don't, you do recognise the fact that by telling others that there are employment opportunities in your areas won't get you unemployed. Those are one of the things that they, they usually look at. Yes.

We can see from this student's response that the litmus test for being intelligent is not just being able to succeed in life, but also being able to help others in your community to also succeed. His response also indicate that individuals who fail to do this are labelled as being "selfish". This is possibly because they are considered to be individuals who live to serve their own personal interests and not for the common good of their people. Thus, the author is of the view that this might be because in a way such individuals are regarded as not being observant of their culture or seen as working against it. As a result such individuals are viewed selfish, and thus unintelligent.

In addition to social responsibility, the current study also found that academic excellence and material success were also other major aspects of intelligence that the students used to determine intelligence in themselves and others. These findings are also consistent with other studies conducted in similar contests (Mpofu, 1993 & 2004). However, within the context of this study, there were certain factors that were reported by the students which were not illustrated in other studies. For example, regarding academic excellence, there was a general consensus among the students in that for a person to be considered academically intelligent, that individual must complete their course modules with high grades. This means if an individual passes with average marks, then they cannot be regarded academically intelligent, but rather regarded as someone who has done just well enough to complete their course of study. However, the interesting part about these findings is that all individuals who are educated are automatically given the status of being intelligent. This is especially noted in cases where such individuals are being compared with those who are uneducated (It is also important to mention that being educated in this context refers to having received formal education).

Therefore, when it comes to academic intelligence, the author's analysis of the results shows that there seems to be a ranking order on how Black South African cultures determine intelligence. The findings show that there is an inclination to give more credit to those who have exceptionally performed well in their course of study than those who did not. The findings also showed that in Black South African cultures individuals who have formal education are at face value given the status of being intelligent, compared to those who do not have formal education. Hence, as an example of this would be a situation where we have three individuals, two of these individuals have received formal education and one has not. The ranking order on who is the most intelligent between these three individuals would, first be between those who have received formal education, and have received the highest grades in their studies. Hence, the second person to be considered intelligent would be the individual with the lowest scores between them, and the last would be the person who have not received formal education.

Hence, it was reported by some of the students (see extract 14 in the result section) that individuals without formal education have to work hard to "prove" that they are intelligent, whereas those who are educated do not have to.

An example given by one student is that uneducated individuals have to have some form of talent that helps them survive or achieve some form of material success that will make others sort of "see" them. This could be in the form of being a successful businessman, or a leader of some sort in their community. However, although the uneducated individual might achieve those material successes, they will always be viewed as less intelligent compared to those who are educated as they are sort of stigmatised for lacking the academic aspect of intelligence. As reported by some of the students, this often comes to play in situations where major decisions have to be made in the community.

Moreover, although uneducated people might be consulted for certain issues experienced within the community, this is often out of honour and understanding that such individuals also possess other forms of intelligence (and this usually relates to knowledge about culture). However, those who are educated are often trusted to make final decisions in solving these issues. Hence, it is the author's impression that in Black South African cultures although there is respect, and general recognition in that uneducated individuals also do possess intelligence. Nonetheless, such individuals need to first have some form of material success for them to be acknowledged as an intelligent person. This then serves as "proof" to others that the uneducated individual is somewhat intelligent because they are capable of making something out of themselves even without formal education.

When it comes to material success as being one of the major determinants of intelligence. The author noted that this aspect was somehow interrelated to family and social responsibility. The author also noted that individuals who were materially successful were considered intelligent only if there were financially supportive to their family and assisted others in their community. The student's views suggested that being material successful is not good enough for a person to be considered intelligent, but that the most determining factor is how the individual behaves after achieving material success. For example individuals who are materially successful, are expected to provide financially to their families, and also not to use their money frivolously. Doing this shows that the individual is responsible, and thus intelligent because after obtaining success they do not abandon their family. This shows that the individual has not forgotten where they come from.

On the contrary, if it happens that a person becomes materially successful but neglect their family or use their money frivolously, they will be automatically regarded as unintelligent because they are seen as someone who is irresponsible, and sort of "forgotten" where they come from. Therefore, material success as a determinant of intelligent behaviour in Black South African cultures is not used independently, but in relation to how the individual manages and make use of this material success. Thus, achieving material success alone does not warrant that the individual will be considered intelligent, they are only considered intelligent if they provide for their family, and assist others in the community.

These findings again seems to be tied to cultural beliefs about what is considered an intelligent behaviour. Hence, within the social constructionists view, these findings can again be attributed to cultural values and beliefs about what is seen as an intelligent behaviour. This is because the students in the study seem to use their cultural norms to define and determine intelligent behaviours in themselves and others. For example, any individual who is materially successful but deviates from the Black South African cultural norm of "providing for one's family" is labelled as being "lost" or "forgotten where they came". This is because in their culture the norm is that when one have the means to support their family, they expected to do so without being told. Accordingly, if one fails to do this, it shows that one is "lost" because they are not fulfilling their obligations. This particular example evidently show that the student's culture plays a big role in how they determine intelligence. It also shows that cultural beliefs about intelligence plays a key role in how individuals generally determine intelligent behaviour.

Respect and maintaining a good public image are also other factors that are identified by the students as some of determining features of an intelligent behaviour in Black South African cultures. However the author noted that out of all the determining factors of intelligence, there are many dynamics attached to the aspect of respect. The first dynamic is that respect is not only used as a determining factor for intelligence, but also used as a determining factor for a person's character. This especially relates to how younger persons interact with older people in their community. The second dynamic is that the aspect of respect in relation to determining intelligence seems to be more relevant when determining intelligence among younger individuals than with older persons.

Hence, the findings indicated that in Black South African cultures younger individuals who are rude or who disregard the counsel of their elders, are viewed as being ill-mannered, and thus unwise. However, this factor is not applied when judging the intelligence of older persons. This is because in most Black African cultures, older people are generally seen as possessing wisdom or knowledge about things which they have gathered through life experiences (Idang, 2014). Hence, younger people are expected to heed to their elders counsel. Moreover, this might be because younger people in African cultures are generally perceived to be inexperienced about how to handle hardships in life. Hence, if a younger person is rude to their elders or even worse disregard their counsel, they are likely to be regarded as foolish/unintelligent since such behaviour is outside of the cultural norm.

In addition to the aspect of respect for one's elders, self-respect and public presentation is also one of the major factors that the students identified as being important in determining intelligence within Black South African cultures. The results indicated that those who present a good public image through their behaviours (manners when speaking, addressing problems, and dress code), and attitudes are likely to be considered intelligent than those who have a bad public image. An interesting dynamic about the findings associated with this aspect, is that there are different expectations on how man and women must present themselves publicly in order to be regarded intelligent. Hence, the expectations for what is considered a good public image for men appears to be different from what is expected of women. For example, one research participant stated that women are considered to have a good public image if they remain sexually inactive until they are married. And that if they do happen to engage in premarital sexual relations, they must at least have few sexual partners. Such individuals are regarded intelligent because they are able to resist temptation from men, and thus show that they have a strong character (and therefore wise). On the other hand, having sex before marriage and having multiple sexual partners is not considered a bad public image for men. Even though this might give them the reputation of being philanderers, it does not affect how they are viewed intellectually. Hence, it is the author's impression that the aspect of self-respect and public reputation as it relates to determining intelligence is tied to cultural expectation of how men and women should conduct themselves publicly.

This is because in most Black South African cultures women are trained at a very young age to guide their virginity (and hence their pride/character) through not allowing men to have sexual intercourse with them before marriage (Maluleke, 2012). And, although there are cultural practises (such as AmaXhosa's *Ulwaluko*-male initiation ritual) which are aimed at transforming boys into man. These male practices often focus on manhood issues such as respect, accountability, strength, and taking care of one's family (Maluleke, 2012). These rituals often do not emphasise preserving male virginity or avoiding deflowering girls. And as a result avoiding sexual intercourse before marriage is inadvertently expected to be a women's moral duty, and not that of a man. Hence, this might be the reason why in Black South African cultures women are seen as being less intelligent if they are known to have many sexual partners.

Another important factor that was noted when analysing the findings regarding self-respect and public image, is that individuals who have bad public reputation are more likely to be generally viewed as being unintelligent despite possessing other aspects of intelligence. The author's impression is that this is because in African societies lack of self-respect is often seen as character of an unintelligent person (Idang, 2014). However, the author also noted that when an individual changes their behaviour and thus regain a good public image, the community also changes their perspective on how they view the individual intellectually. This is because it is assumed that the individual was immature and thus use to act unintelligently. And as soon as they change their behaviour and act differently, they are thus regarded to have matured, and therefore gained wisdom from their past mistakes. Hence, the action of changing ones behaviour is somewhat seen as sign that the individual have changed due to realizing that his/her ways were bad and thus foolish. And since they can now differentiate between a bad and good behaviour, this shows that they are wiser and thus intelligent. Thus, this aspect of determining intelligence tends to vary with the individual's behaviour, or in their development in how they present themselves publicly. This then suggests that individuals in these cultures have the opportunity to develop this aspect of intelligence throughout their life.

Considering that the above identified factors of determining intelligent behaviour are rooted in Black South African cultural values; and that are considered to be important for the proper functioning and development of these groups. These findings then seems to support the social constructionist's view in that intelligence should be viewed as the combination of skills and abilities which a particular group or culture uses for its existence and development. This also suggest that there is indeed a need to define and understand intelligence within cultural contests (Sternberg, 2004; Anastasi, 1992; Berry, 2004). Moreover, we have also seen in the context of this study that sometimes notions of intelligence vary even among people of the same culture due to socio-environmental factors. Hence, attempting to define and measure it without considering these aspects can have negative implications, especially when it comes to IQ testing.

5.5 Conclusion.

This chapter discussed and illustrated the findings of this study. We first discussed how the students perceived the nature of intelligence and then moved on to discussing how they conceptualised intelligence within their culture. We saw that hereditary and environmental factors were believed to be very influential in the development of intelligence. We also explored that in addition to these factors personal responsibility was also regarded as playing a major role in the development of intelligence. These findings was attributed to Black South African cultural values.

We saw that intelligence within Black South African is considered to be made of multiple aspects and that in order for one to be considered intelligence they have to possess most of these aspects if not all of them. Factors such as social/family responsibility, respect, public image, and academic excellence were identified as playing a major role in determining whether an individual was considered intelligent or not. This is because Black South African cultures are collective in nature and thus consider aspects related to social responsibility very important.

The following chapter will attempt to provide an explanation of how this thesis addressed the different research questions and drew its conclusions. It will also discuss some of the limitations of this study and provide recommendations for future research.

CHAPTER 6: CONCLUSION

6.1 Introduction.

In the previous chapters it was explored that intelligence is no doubt one of the most well researched psychological construct within the field of psychology. However to this date theorists still struggle to come into agreement as to what intelligence is. It was also learned that one of the main reasons for this is that it is a social construct- which means that notions of what is considered an intelligent behaviour will vary from one culture to the next. Hence, it has been proposed by several theorists (Anastasi, 1992; Berry, 2004; Sternberg, 2004) that since intelligence is a social construct it must be defined and understood only in relation to the context in which it is studied in. Although there have been studies that have aimed to explore conceptualisations of intelligence among people from African descent, very few have been conducted within the South African context. This poses a challenge considering that it has been proclaimed that intelligence must be defined within the context of culture. Thus, the current study was aimed at exploring conceptualisations of intelligence among Black South African students in order to gain more understanding on how they conceptualise intelligence in their culture. This was anticipated to help the field of psychology in South Africa to gain more understanding on how individuals from Black South African cultures generally conceptualise intelligence. And thus help mental health practitioners make appropriate judgments in their service delivery, especially regarding intelligence testing as it pertains to Black people in South Africa.

This study sampled 9 Black South African students at UKZN, Pietermaritzburg Campus. The main aim of the study was to explore how the students conceptualised and determined intelligence within their culture. Hence, the study adopted the philosophical and methodological perspective of social constructionism. In-depth qualitative interviews were used to collect data in order gain more insight on how students from Black South African cultures generally conceptualise and determine intelligence. The results of the study were then analysed using a thematic analysis approach and interpreted using the social constructionists' approach. The social constructionist's perspective helped in elucidating the effect that cultural beliefs and values had on how the students conceptualise and determine intelligence in their culture.

The study addressed three main research questions. The first question explored how Black South African students conceptualised intelligence within their culture. In order to get a better understanding of how they conceptualised intelligence, the author first explored their understanding of the nature of intelligence. And the results suggested that the students believed that both hereditary and environmental factors played a major role in the development of intelligence. The students also reported personal efforts as one of the factors regarded to be important in the development of intelligence in their culture. The results were attributed to the fact that within Black South African cultures, hereditary and environmental factors as it pertains to intelligence are viewed as supportive mechanisms that aids the individual to develop their intelligence. However, it is believed that these on their own will not help the individual to fully develop their intelligence, hence the individual needs to put personal effort in order to ensure that their intelligence is developed. This assertion was seen as rooted in the African cultural belief which emphasises personal responsibility in order for one to gain personal, and collective success (Idang, 2014).

On the question of how the students conceptualised intelligence, the results indicated that they perceived intelligence as something that is comprised of multiple aspects. The identified aspects included social/family responsibility, respect, compassion, academic success, and good public image. These results were interpreted and understood within the social constructionist's perspective as a resulting from African values and belief system. In African cultures social relationships are highly valued since African communities are communal in nature (Cocodia, 2014), thus social skills such as respect and compassion play an important role in maintaining these social relationships.

The second question focused on exploring some of the factors which the students believed influenced their conceptualisations of intelligence. And the results revealed that most of the students strongly felt that culture and family upbringing had a major influence on how they conceptualise intelligence. However, some students also felt that that education also played a role in influencing how they perceive intelligence. Most of the students who held such views were predominantly from semi-urban/Urban areas. Students from rural areas maintained that culture and family upbringing were the main factors that influenced their notions of intelligence.

Considering that the students from semi-urban/Urban areas were more exposed to Western culture than they were with African culture, the differing opinions regarding what they believed influenced their notions of intelligence were attributed to socio-educational influence. We noted that even though all of the students identified themselves to be from Black South African culture, students who lived in urban areas did not live-in environments which were influenced by African values and Belief systems. And as a result their notions of intelligence were seen as not mainly influenced by African values, and belief systems. We then established that it is important that we take for granted that all individuals from Black South Africans have the same notions of intelligence. The reason for this is that their notions of intelligence tends to vary according to where they live.

The third and last question of this study was aimed at exploring how the students determined intelligence within their culture. And the results showed that there is currently no formal means of determining intelligence as seen in Western cultures, however implicit theories of intelligence are used to determine whether an individual is intelligent or not. This is done by examining whether the individual possesses most of the aspects associated with being intelligent. Thus, those who are found to have fewer aspects of intelligence are less likely to be considered intelligent. On the other hand those who possesses many of these aspects are regarded intelligent. Aspects which the students identified as important in determining intelligent included, providing for one's family, respect, material success, good public image, and academic excellence. The identified aspects are rooted in Black South African cultural values, as they are considered to be important for the proper functioning and development of these groups. Hence these findings supported the social constructionist's view which assert that intelligence should be viewed as sets of skills and abilities which helps a certain group or culture develop and be defined as intelligent only within that culture (Anastasi, 1992).

The results of this study thus indicated that in Black South African cultures intelligence is generally considered to be comprised of many facets, this includes providing for oneself and mostly one's family, respect for oneself and others, being a role model in your community and society in general, having material success, and academic excellence.

These factors are rooted in African principles and beliefs, which values social responsibility and tends to view the individual as not separate from the world. Hence, factors related to social responsibility like providing for one's family are very important for people from African cultures, and as a result those who possess such qualities are considered intelligent since they are regarded as being observant of their culture.

6.1. Implications for theory.

The findings of this study indicated that people from Black South African cultures tends to value aspects of intelligence that are generally associated with social responsibility. This was found to be mostly influenced by African cultural beliefs, and values-which tends to promote collaborative relationships. Hence, this study also showed that conceptualisations of intelligence are largely influenced by an individual's cultural background. Hence, this helps explain why the findings of the current study varies from those conducted among individuals from Western cultures, which showed that they tend to value aspects of intelligence which are associated with practical and problem-solving skills.

Based on the findings of the current study it is evident that there are implications for theories of intelligence within the South African context. As the results of the current study indicate, people from Black South African cultures conceptualize intelligence differently to individuals from western cultures. However, most of the theories which are used to understand intelligence in South Africa were developed within Western context. This means that the cultural foundations of these theories are not congruent to Black South African cultural values, and beliefs about what is considered an intelligent behaviour. Considering the fact that IQ/intelligence tests are known to be developed based on theories of intelligence. This means that individuals from Black South African cultures are less likely to do well in these tests. Hence, this might lead to them being inadvertently marginalized in work and educational settings, considering that IQ tests are sometimes used in these settings to select candidates. This then suggests that South African scholars within the field of human intelligence need to develop theories of intelligence which will be relevant to the South African context, especially among people from Black South African cultures.

6.2. Strengths and Limitations of this study.

The study had a small sample comprised of only nine students from across the various colleges at UKZN, Pietermaritzburg Campus. While the sample was too small to be representative of all Black South African students within the campus, it was appropriate for presenting results at a campus level and transferring for Black South African students in similar context. However, the researcher acknowledges that this may have impacted the results negatively in terms of gaining views that could have been associated to larger Campus population. Another issue associated with the sample, is that there were more females (6) than male (3) research participant in the study, thus there was disparity in gender representability. This could be attributed to lack of interest to participate in the study by potential male research participants, possibly due to time constraints and course demands. However it is the author's view that despite the disparity in gender representability the study still managed to explore the topic on a deeper level since the males enrolled in the study were very informative. Moreover, the study did not intend to capture the topic based on the gender orientation of the participants, but rather based on their cultural conditioning.

Adopting a qualitative approach in collecting data also allowed for in-depth discussion of the topic. Using one on one in-depth qualitative interviews allowed some level of ease and free participation since the students where in an environment that did not subject them to be in the scrutiny of others. Thus, this allowed them to be free to express their opinions without fear of judgements from others. The use of the audio recording device also aided the researcher in collecting data without worry of losing important information during the interview process and thus enabled the researcher to engage with the participants on the deeper level. This also afforded the researcher with the opportunity to easily go back and listen to important sections of the interviews and reflect on the data during the data analysis process. This then ensured that the data reported in the study was a true representation of the students and not that of the researcher. The use of the social constructionists approach in understanding the research participant's views also helped the researcher ensure that the generated data reflected the research participant's conceptualisations of intelligence and not that of the researcher.

A possible limitation to this study can be attributed to the fact that both the researcher and the students are Black South African and share common culture.

While this might have impacted the study positively in the sense that the researcher was able to understand and relate better with the research participants. The author acknowledges that this might also have had some negative implications for the results of the study, as the findings might have been different had the study been conducted by someone from a different culture or race. However, since this aspect was anticipated in the beginning of the research process, the author applied reflexity throughout the entire research process to avoid being biased or imposing her beliefs in the study. Reflexivity in qualitative research helps the researcher reflect on how their beliefs, judgements and practices during the research process might affect the research findings (Berger, 2015). Similarly, the author tried acknowledging the fact that she is a Black South African might have influenced my understanding and consequently analysis of the study findings.

6.3 Recommendations.

The findings of this study indicated that Black South African student's conceptualisations of intelligence are rooted in African cultural beliefs and values of what is considered an intelligent behaviour. However, the study also found that although some of the students identified themselves as being from Black South African culture, these students did not grow up in environments that were influenced by African culture, and thus held notions of intelligence which are not associated with African belief systems. This shows that it is possible for a person to identify themselves with a specific culture but not entirely hold views or beliefs that are associated with that specific culture. Thus further research could explore if all Black South Africans from different socio-cultural or environmental background hold the same notions of intelligence. This could be a comparative study between Black South African people from rural and semi-urban/urban areas. Such research might help illuminate whether the disparity in opinions by the students in this study was indeed due to lack of exposure to African culture or due to other factors.

Moreover, since this study indicated that most Black South African students hold African notions of what an intelligent behaviour is. And considering that in South Africa intelligence is currently determined by using of psychometric tests which were mostly developed in Western contests. Future research could also look at the implications of using such tests among people from Black South African cultures, especially the implications that this might have in educational and work

environments. Additionally, considering that the results indicated that Black South African students are vastly different to Western views of intelligence, and that within their culture intelligence is not judged by the administering of certain tests (as observed in western culture), but rather judged through observing and determining if the individual possesses a number of certain aspects of intelligence. This poses a challenge for South African psychometrists since currently there are no psychometric tests which are currently designed to accommodate this factor. Thus, there is a need for South African psychometrists to revise IQ tests so that they accommodate Black South African individuals.

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APPENDICES:

Appendix 1: Gatekeeper's approval

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

25 July 2018

Miss Yvonne Mdakane (SN 207503891)
School of Applied Human Sciences
College of Humanities
Pietermaritzburg Campus
UKZN
Email: 207503891@stu.ukzn.ac.za

Dear Miss Mdakane

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:

"Exploring the conceptualisations of intelligence among Black students at the University of KwaZulu-Natal Pietermaritzburg Campus."

It is noted that you will be constituting your sample by conducting interviews with black South African students on the Pietermaritzburg Campus.

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

- 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.

You are not authorized to contact staff and students using 'Microsoft Outlook' address book. Identity numbers and email addresses of individuals are not a matter of public record and are protected according to Section 14 of the South African Constitution, as well as the Protection of Public Information Act. For the release of such information over to yourself for research purposes, the University of KwaZulu-Natal will need express consent from the relevant data subjects. Data collected must be treated with due confidentiality and anonymity.

Yours sincerely

[redacted]

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

1910 - 2010
100 YEARS OF ACADEMIC EXCELLENCE

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

Appendix 2: Ethical clearance.

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

16 October 2018

Ms Yvonne Mdakane (207503891)
School of Applied Human Sciences – Psychology
Pietermaritzburg Campus

Dear Ms Mdakane,

Protocol reference number: HSS/0741/018M
Project title: Exploring the conceptualisations of intelligence among Black students at the University of KwaZulu-Natal Pietermaritzburg Campus

Approval Notification – Expedited Application

In response to your application received 21 June 2018, 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

[redacted]

.....
Dr Rosemary Sibanda (Deputy Chair)

/ms

Cc Supervisor: Dr Phindile Mayaba
Cc Academic Leader Research: Dr Maud Mthembu
Cc School Administrator: Ms Priya Konan

Humanities & Social Sciences Research Ethics Committee
Professor Shenuka Singh (Chair)
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Website: www.ukzn.ac.za

1910 - 2010
100 YEARS OF ACADEMIC EXCELLENCE

Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

Appendix 3: Study's criteria for participation.

STUDY'S CRITERIA FOR PARTICIPATION-CHECKLIST FORM

1. Are you Black?
   YES___ / NO___
2. Are you a South African citizen?
   YES___ / NO___
3. Which South African tribe to you identify with?
   _____
4. What is your gender?
   M___ / F___
5. Are you above 21 yrs. of age?
   YES___ / NO___
6. Are you currently registered as a student in this campus?
   YES___ / NO___
7. Are you willing to be interviewed for 45 minutes -1 hour between the month of November 2018 and February 2019?
   YES___ / NO___
8. Are you willing for your interview to be audio recorded?
   YES ___/ NO___

Participant contact details:

Name: _____

Cell. No.: _____

Email: _____

Appendix 4: Interview schedule.

INTERVIEW SCHEDULE

1. As a Black person, what do you understand intelligence to be?

2. Do you think that the way you were raised influenced the way you understand intelligence?

3. In your culture, how do you determine that a person is intelligent?

4. Is intelligence something you are born with?

5. In your culture, what are some of the things that you associate with intelligence?

6. Do you think that intelligence is varied or limited to specific characteristics?

7. Do you think that intelligence is something one can accumulate or develop over time?

8. Is there anything that you would like to add or want people to know about the way you understand intelligence, which I might have not asked?

Appendix 5: Informed consent.

UKZN HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE (HSSREC)

APPLICATION FOR ETHICS APPROVAL

For research with human participants

INFORMED CONSENT

Date: 20 March 2018

Good day

My name is Yvonne Mdakane (207503891). I am a master's student at the University of Kwa-Zulu Natal Pietermaritzburg Campus. The title of my research is: Exploring the conceptualisations of intelligence among Black student at the University of Kwa-Zulu Natal Pietermaritzburg Campus

You are being invited to consider participating in a study that involves asking various interview questions relating to intelligence. The aim and purpose of this study is to get a clear understanding on how black students formulate intelligence within their culture, as they have been few studies that have focused in this area of research in South Africa. The study is expected to enrol 15 Black South African students at the University of KwaZulu-Natal Pietermaritzburg Campus. And will involve answering questions on intelligence and reading the interview transcript on a later stage. The duration of your participation if you choose to enrol and remain in the study is expected to be 45 minutes on a scheduled date suitable for you. This study is not funded and is done to satisfy my course requirements.

The researcher does not anticipate that you will experience physical or emotional harm by participating in this study, however if at any given stage of the research process you experience any form of harm you will be referred for professional help accordingly. In addition to the information above the following should be noted about this study:

- The information that you provide will be used for scholarly research only.
- Your participation is entirely voluntary. Hence you have a choice to participate or not to participate, and stop participating in the research, and you will not be penalized for taking such an action.
- The interview will be recorded to assist the researcher in transcribing stages.

- Your views in this interview will be presented anonymously. Your identity will be disclosed in any form in the study.
- The interview will take about 45 minutes, and you will be required to look at the transcript on a later date to verify if the transcripts truly reflect your views of the interview.
- The record as well as other items associated with the interview will be held in a protected file accessible only to me and my supervisor. After a period of 5 years, in line with the rules of the university, it will be disposed by shredding and burning.
- If you agree to participate, please sign the declaration attached to this statement (a separate sheet will be provided for signatures)

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (approval number: HSS/0741/018M).

In the event of any problems or concerns/questions you may contact the researcher at (provide contact details) or the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus

Govan Mbeki Building

Private Bag X 54001
Durban
4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557- Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

I …… have been informed about the study titled, "**Exploring the conceptualisations of intelligence among Black students at the University of KwaZulu-Natal campus"** by Yvonne Mdakane.

I understand the purpose and procedures of the study (add these again if appropriate) and 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.

I have been informed about any available compensation or medical treatment if injury occurs to me as a result of study-related procedures. If I have any further questions/concerns or queries related to the study I understand that I may contact the researcher provided in the informed consent letter.

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:

Appendix 6: Consent for audio-recording

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus

Govan Mbeki Building

Private Bag X 54001
Durban
4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557 - Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

Additional consent, where applicable

I hereby provide consent to:

Audio-record my interview / focus group discussion	YES / NO
Video-record my interview / focus group discussion	YES / NO
Use of my photographs for research purposes	YES / NO

_____ _____

Signature of Participant **Date**

_____ _____

Signature of Witness **Date**

(Where applicable)

_____ _____

Signature of Translator **Date**

(Where applicable)

Appendix 7: Request for Correspondence check- Letter.

Request for reviewing interview transcript.

Dear participant.

Good day.

Between the period of 2019 and 2020 you were interviewed in a study titled**, "Exploring the conceptualisations of intelligence among Black students at the University of Kwa-Zulu Natal, Pietermaritzburg Campus"**. You are now being requested to review your interview transcript. This is to ensure that the interview transcript is a true reflection of the views you stated during the interview, and that your views have not been fabricated by the researcher. Furthermore, this also serves to enhance the validity of the study.

The researcher requests that you read through the interview and make corrections where you may notice any discrepancies. Corrections are to be done on the attached correspondence check form, which you will email back to the researcher on the email address provided below.

Please ensure that you sign the correspondence check form when you are done with reviewing your transcript.

Your collaboration is appreciated.

Kind regards

Yvonne Mdakane

[Email: masadinea88@gmail.com]

Appendix 8: Correspondence check form

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

CORRESPONDENCE CHECK.

Please use this form to state any discrepancies and to make any corrections that you might have noted in your interview transcript. You can increase the comments lines if needed.

PLEASE NOTE: When making the corrections/stating discrepancies, please ensure that you reference the line numbers where the discrepancy is noted in the transcript-followed by your corrections (i.e., line 03 – I don't recall saying this/this is what I was trying to say…**).**

COMMENTS/CORRECTIONS BY PARTICIPANT:

This serves to confirm that I (full name) _____have read the interview transcript of the study titled, "**Exploring the conceptualisations of intelligence among Black students at the University of Kwa-**

Zulu Natal, Pietermaritzburg Campus, which I was part of. As a means to establish consistency with my views during the interview, I have noted and corrected the observed discrepancies. Where no discrepancies have been indicated or found, I confirm that the researcher truthfully and correctly reflected my original views on the subject.

Date: _____

Participants Signature: _____