

University of the Western Cape



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Student Name : Sabelo Sawula

Student Number : 2825798

Incorporating indigenous African languages in Higher Education: Student attitudes towards learning materials in isiXhosa at the University of the Western Cape.

Principal supervisor: Professor Bassey E. Antia

Co-supervisor: Professor Charlyn Dyers

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ABSTRACT

There have been extensive studies conducted on the language attitudes of students or their parents at primary, secondary as well as tertiary levels of education in South Africa. Many scholars have found that African language speakers hold negative attitudes towards their own languages (De Klerk, 2000; Barkhuizen, 2002; Dyers, 1999; and Conduah, 2003). This is rather unfortunate, given the several constitutional and other policy provisions in South Africa promoting multilingual education (see Constitution, 1996; Language-in-education policy, 1997; Higher education language policy, 2002; UWC language policy, 2003). These negative attitudes have been attributed to a number of factors by scholars (see Kamwangamalu, 2000; Somhlahlo, 2009; Alexander 2004). These factors include:

- Historical factors: the substandard quality of the curriculum that was delivered in African language under the Bantu Education Act),
- Economic factors: concern for the post-schooling job prospects for learners in a global economy believed to be dominated by English
- Policy design issues: e.g. forms of language recognized for schooling
- Quality of teachers: e.g. their training, commitment and actual subject knowledge

Although these above-mentioned factors may be valid, the lack of fully developed learning materials in African languages may be another factor. For instance, while conducting a survey in Zonnebloem, Cape Town, Heugh (2010) observed negative attitudes towards African languages, but when interventions were made to introduce an African language (isiXhosa) in classroom and to provide material in that language, those attitudes changed drastically. Learners participated a lot more and asked more questions in class. It is in light of this that the need was seen for an empirical investigation into how the challenge of negative attitudes to the use of African languages can be addressed by adequate preparations around materials, personnel and other resources which are perceived by students as useful.

Drawing on theoretical frameworks of language attitudes (Baker, 1992), language policy (e.g. Baldauf and Kaplan, 1997; Kamwangamalu, 2000) and terminology development (e.g. Antia

2000; Nkomo and Madiba, 2011), this thesis attempts to address these issues. The study is an empirical investigation on how the attitudes of students towards the use of isiXhosa may be influenced by the provision of learning resources in isiXhosa (disciplinary texts created on the basis of carefully researched terminology). Methodologically, this study draws on both quantitative and qualitative data for its findings, which include the administration of questionnaires, observation and follow-up interviews. Besides the research component of the thesis, there is also a development dimension, which is fairly rare on the South African landscape of research in multilingualism in higher education. An intervention was produced in the form of a recorded lecture in isiXhosa on the surface anatomy of the heart, based on the curriculum for a module offered to nursing students at UWC.

The study contributes to ongoing research on the use of African languages in Higher Education in South Africa in the following ways:

- initial positive attitudes towards the incorporation of isiXhosa in their studies changed to negative attitudes after the intervention, because students could not cope with the level of formal isiXhosa at this level – this is an issue that has to be addressed by scholars engaged in the language diversification project in Higher Education in South Africa;
- students were keen to have isiXhosa incorporated into their study and lecture materials from first year onwards – starting too late was not seen as particularly helpful;
- students preferred isiXhosa to be used alongside English, instead of having English replaced by isiXhosa.

In sum, the study shows that the incorporation of the mother-tongue was broadly supported by the research participants, but their support was subject to a number of conditions as outlined above. There are therefore a number of pertinent issues for further research arising from this thesis.

KEY WORDS

Multilingualism

Language Attitudes

Language Ideologies

Higher Education

Language planning

Language policy

Terminology Development

University of Western Cape

IsiXhosa

Nursing



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PLAGIARISM DECLARATION

I declare that this thesis *Incorporating Indigenous African languages in Higher Education: Student attitudes towards learning materials in isiXhosa at the University of the Western Cape* is my own work. It has not been submitted before, for any degree, or examination in any other university. All the relevant sources that I have made use of or quoted, have been indicated and acknowledged by complete referencing.

Sabelo Sawula

Signed:.....



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First and foremost, I must thank the Almighty for allowing me to complete this paper. It is not from our own understanding that we discover the world but for his ultimate purpose of true salvation.

I cannot highlight enough the journey of discovery I went through to complete this paper. The eagerness of strangers to assist, the motivation from the study groups urging me to investigate and probe more into the subject. Their eagerness born from the innate need we all encounter to learn more about ourselves. This journey taught me that academia is not only the scientific pursuit of the understanding of things, but the hope that whatever understanding we find teaches us more about who we are and what our purpose is as mankind. I am humbled to be a part of that universal journey.

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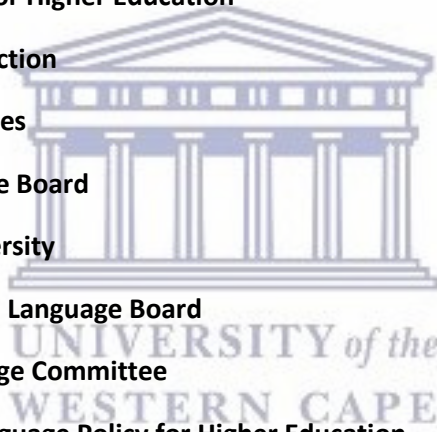
To my friends. Thank you for understanding when I could not be available. It took a lot of self-discipline to miss the braais and birthdays. It helped knowing that you understand the importance of my work. Thank you for allowing me to take a break when it was needed.

Finally, to my beautiful kids, Sibahle Thobile Mbatha and Azraa Sithandiwe Adams, "success is not pursued but attracted by the person you become". I only pray that in all my endeavours, I inspire you to conquer not only the world, but yourselves. No one else knows but you are the reason I gave up everything else and took this hard but fulfilling path.

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ABBREVIATIONS AND ACRONYMS

ANC	African National Congress
CELS	Contemporary English Language Studies
DHET	Department of Higher Education and Training
EFF	Economic Freedom Fighters
HEI	Higher Education Institution
HUB	Human Biology
LCS	Language and Communication Studies
LOLT	Language of teaching and learning
LPHE	Language Policy for Higher Education
Moi	Medium of Instruction
MUST	Multilingual Studies
NLB	National Language Board
NWU	North West University
PanSALB	Pan South African Language Board
PLC	Provincial Language Committee
SALPHE	South African Language Policy for Higher Education
SATI	South African Translators Institute
SL	Source Language
SUN	Stellenbosch University
TL	Target Language
UCT	University of Cape Town
UJ	University of Johannesburg
UNISA	University of South Africa
UWC	University of the Western Cape
Wits	Witwatersrand University



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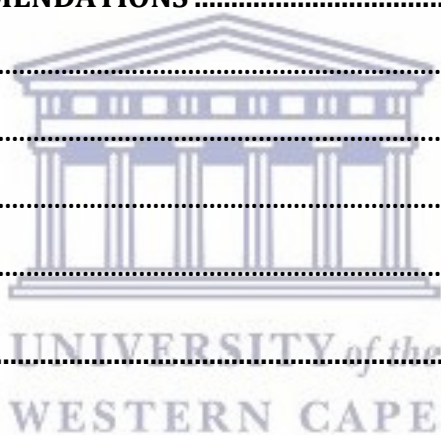


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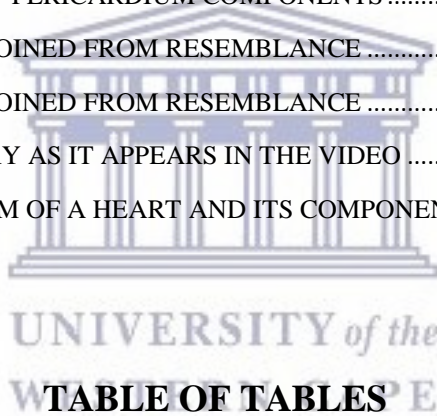


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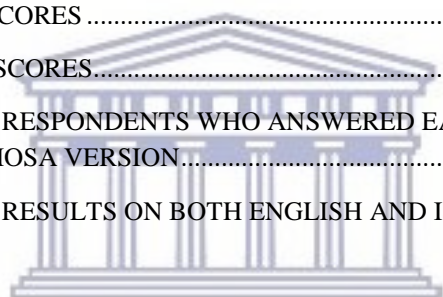
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CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.0 Introduction

“Despite what the new language policy says, the failure to implement the policy has compelled the black population at large to question the instrumental value of their languages” (Kamwangamalu, 2000: 129).

The issue of language in South Africa has become a major concern, an issue that has also been discussed by various scholars (see Kamwangamalu, 2000; Alexander, 2004; Dyers, 1999; Bassey, 2015; *et al.*). To a certain extent, it has become a festering boil that is waiting to burst. In fact, more recently, manifestations of such anger have been seen through recent protests around South African universities, particularly at the University of Free State and Stellenbosch. The particular issue within the two universities was the claimed marginalization of those students who do not speak Afrikaans (mostly indigenous African language speakers). What was interesting to note was that, some of the students, most of whom were indigenous African language speakers, suggested English to be the only medium of instruction (as it was predominantly Afrikaans in both universities) instead of their own languages. This ignited a question relating to the place of indigenous African languages in the higher education paradigm, possibly as the language to be used for teaching and learning. From this, it would be reasonable to infer that many of the protesters may not believe that their languages can be beneficial to their academic progress. In fact, these sentiments are seen in Heugh’s (2009) study, when she observed a vast number of students showing disinterest in being taught in the African language, which is the mother-tongue.

Prah also points out that “it is noteworthy that the language question in South Africa is one of the undigested features of post-Apartheid South Africa. In its present form, its origins are tied to the settler-colonial system” (Prah, 2007: 5). In other words, post-1994, the African languages still do not enjoy the parity of esteem enjoyed by English and Afrikaans. Many scholars (see

Kamwangamalu, 2000; Alexander, 2003) see this a problem that cannot be separated from the ideological inculcations where the use of non-native African languages was associated with higher functions. This is particularly true if we look at similar instances regarding current language issues which historically can be traced to the 1976 Soweto uprising. During the uprising, Afrikaans was rejected by the learners as a medium of instruction (MoI) in schools. Prah (2007: 9) believes that the rejection “had not been made on the grounds that they preferred the use of their own languages as MoI.” Instead, the rejection was on the ideologically inculcated premise about English, as seen by Alexander (2004: 9), who expressed that then, it was seen as the “language that has the finest literature on earth and is the most universally useful of all languages.” From the points above and previous scholars’ discussions, speakers have, to an extent, negative we can never run away from the fact that indigenous African language attitudes towards their languages. Indeed, it cannot be disputed that the historical endeavours, such as marginalization of African languages, particularly in higher functions, foreshadowed these current negative attitudes toward African languages as languages of learning and teaching. However, these attitudes in turn are also seen as the barrier in efforts to promote these languages, especially in Higher Education Institutions (HEIs) as discussed by many scholars (see Hlatshwayo and Siziba, 2013; Heugh, 2009; Dyers, 1999; Maseko, 2014a & b).

This study, therefore, offers an analysis of the attitudes of selected students in Nursing at the University of the Western Cape (UWC) towards the incorporation of isiXhosa in their study materials. This has been done by administering questionnaires to the Nursing students prior and post to an intervention in the form of providing students with learning materials in both isiXhosa and English. The analysis was done adopting qualitative and quantitative methods. In other words, the responses to the questionnaires adopted quantitative analysis while focus group discussions adopted qualitative analysis. The study shows that the incorporation of material in isiXhosa may have a significant impact on student attitudes towards the use of such languages in Higher Education as a result of the greater epistemological access granted by the use of student's primary languages in addition to English, the main medium of instruction at UWC. Furthermore, it interrogates the role of language policy and planning in higher education as advocated in many language policies found in universities of South Africa.

1.1 Background of the study

Whichever way we look at it, in South Africa, English holds a dominant position in education. This is a fact despite the efforts, after the democratic elections of 1994, to promote the use of indigenous languages through the introduction of various policies. During the apartheid regime, only Afrikaans and English were recognised as the official languages although 80 per cent of citizens were African language speakers. The African languages then, were only used in Bantu education but arguably not to promote them, but as an “instrument of political and social control and domination of the majority of the country” (Kamwangamalu, 2000:50).

The Constitution of 1996, therefore, advocated for indigenous languages to be used in the education sphere to ensure equity, and their status was augmented, making them official. Alongside English and Afrikaans, IsiZulu, isiXhosa, isiNdebele, Xitsonga, SiSwati, Tshivenda, Sepedi, Sesotho and Setswana were made official. After 1996, South Africa had 11 official languages. The government’s commitment to nation building in this multilingual state included the introduction of language policies which sought to promote previously disadvantaged languages and multilingualism. Not only have nine indigenous languages been given official status, but the Constitution also allows for them to be used in public institutions, especially in education, through promulgation of language policies (see Constitution, 1996; Language-in-education policy, 1997; Higher education language policy, 2002; UWC language policy, 2003).

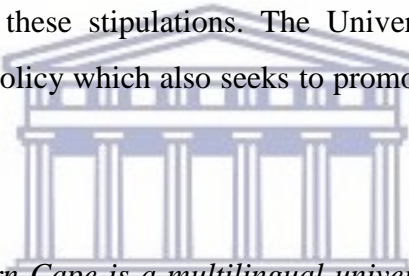
Furthermore, the government established the Pan South African Language Board (PanSALB), which directs different national language bodies (NLBs) for each official language as well as provincial language committees (PLCs) in order to ensure that there is equity of use for the official South African languages as envisaged in the constitution.

The Higher Education Language Policy of 2002 also draws from the Constitution, and it stipulates that:

Everyone has the right to receive education in the official language or languages of their choice in public educational institutions where that education is reasonably practical. In order to ensure the effective access to, and implementation of, this right the state must consider all reasonable educational alternatives, including single-medium institutions, taking into account-

- a) equity;*
- b) practicability; and*
- c) the need to redress the results of past racially discriminatory laws and practices”*
(Section 29 (2) of the Constitution).

Higher Education Institutions (HEIs) have also been given a role to formulate their own language policies in line with these stipulations. The University of the Western Cape, for example, has its own language policy which also seeks to promote multilingualism. Its preamble states:



The University of the Western Cape is a multilingual university, alert to its African and International context. It is committed to helping nurture the multicultural diversity of South Africa and build an equitable and dynamic society. This language policy relates to one aspect of that commitment. It attempts to guide institutional language practice so that it furthers equity, social development and respect for our multilingual heritage.

It further states that with regards to languages to be used in setting of tasks, assignments, tests and examinations,

English, Afrikaans and isiXhosa are the languages that “should be used wherever it is practicable to do so.”

Despite such provisions that seem to try to augment the status of indigenous African languages as languages of learning and teaching, Madiba (2013) contends that these policies imply that these languages will only be used as media of teaching, learning and research in the distant future. In other words, multilingual education envisaged in policies seems to be projected to effect after a longer period. This is also seen in the DHET document, which states that "in the light of practical and other considerations it will be necessary to work within the confines of the status quo until such time as other South African languages have been developed to a level where they may be used in all higher education functions" (DHET 2002: 10). Thus, English, particularly in this multicultural and multilingual University of the Western Cape, still plays the dominant role and the status quo remains the same even in most South African universities. In fact, Madiba (2013) argues that "at this stage no university in South Africa makes use of an indigenous African language as a primary medium of instruction, except in language disciplines." In his paper, he argued that "for African languages to be effectively developed as media of instruction in higher education, they should be used in their current form as primary or auxiliary media of instruction" (Madiba, 2013:387).

Rarmani and Joseph (2002) attempted to respond to the South African Language Policy in Higher Education (SALPHE) by introducing the full dual-medium BA degree in Contemporary English Language Studies (CELS) and Multilingual Studies (MUST) at the University of Limpopo using Sesotho sa Leboa (Northern Sotho) as the medium of instruction. They based their work on the axiom that:

"African languages must be introduced as MOI/LOLT wherever the opportunity allows, using any and every entry point in the educational hierarchy. This means that one does not have to wait for schools to first implement multilingualism as a precondition for universities to build on. Universities could just as well start multilingual education to provide a possible backwash effect for schools. (Ramani and Joseph, 2002:234).

However, one major problem with indigenous African languages as media of instruction is the fact that these languages are not considered adequately developed so that they can be used as

languages of teaching and learning (LoLT) in technology/science fields as compared to English. The Ministry of Higher Education (2002, section 15.2.1) also acknowledged that the promotion of South African languages for use in instruction in higher education will require, amongst others, the development of dictionaries and other teaching and learning materials. Given these arguments above, other initiatives have been taken at various universities to embark on programmes that incorporate indigenous African languages in the classrooms in order to change the status quo in South African universities (cf. Antia 2015a, Antia & Dyers, 2015). For instance, in 2007, the University of Cape Town (UCT) Multilingual Concept Literacy Glossaries project was initiated as part of the implementation of the University's Language Policy. The glossaries were aimed at concept literacy in the different content-learning areas, with the pilot project focusing on developing glossaries for Statistics, Economics and Law for first year students (Nkomo & Madiba, 2011). This was done to aid non-native English speaking students to grasp concepts that were difficult to understand in English. Since UCT's language policy recognizes three languages (isiXhosa, English and Afrikaans), Nkomo and Madiba (2011: 156) argued that it was important to develop such glossaries in these languages at first year stage, as "students have low levels of competence in the respective fields and low proficiency in English which is the primary language of instruction at UCT", at this stage. They argue that contrary to the low competence in English, some students have high level of competence in indigenous languages and thus such competence should be exploited to ensure significant understanding of concepts and address text reception problems so that they can master their respective subject fields. However, they agree that it is still too early to assess the success of the UCT multilingual concept literacy glossaries, hence further research needs to be conducted.

At the University of Stellenbosch (SUN), there have also been numerous attempts at providing bilingual teaching and materials in Afrikaans and English. Some of these methods are captured by Van der Walt (2013) as code-switching, interpreting, co-linguaging, translanguaging, preview-view-review and cross-linguistic work and awareness. Van der Walt reports that some methods have proven to be more successful than others. She further maintains that there is also a need to for more research regarding these strategies as some yielded better results than others (see also Ramani and Joseph, 2002; Antia and Dyers, 2014; Maseko, 2014a & b).

In line with the suggestions from a paper by Stroud and Kerfoot (2013), which suggested that students' multilingual and multimodal repertoires can be used as resources for epistemological access, Antia and Dyers (2016) have been carrying out a formative evaluation of their ongoing experimentation with Afrikaans and isiXhosa lecture and assessment materials for a third year Linguistics module called 'Multilingualism' (LCS 311) at the University of the Western Cape (UWC). Students were provided with a course reader as well as class lecture slides which were then uploaded onto the university's e-learning site, also known as the Ikamva site. The lecture slides were later translated into both Afrikaans and isiXhosa, and recordings were also made of these lectures by competent readers who were also familiar with the content. The completed podcasts, together with the slides, were uploaded onto the Ikamva LCS 311 site for the students to access. Students were then asked to complete a major assignment, which reflected on the experience of learning about 'truncated multilingualism' by drawing on learning material in English, isiXhosa and Afrikaans. Responses were very positive, adding weight to the motivation behind this study for the use of languages other than English.

The responses in Antia and Dyers' study show the need for higher education to dedicate itself to the idea of language equity as envisaged in its policy as well as the constitution. Although the study by Antia and Dyers may not display a holistic view of what the rest of the university community says about the interventions, it certainly interrogates the question of indigenous languages as LoLT.

1.2 Statement of the problem

The issue of negative attitudes towards the educational use of African languages and the question of non-implementation of language policies have been widely reported (e.g. Stroud & Kerfoot 2013, Madiba 2013, Antia 2015b). A number of factors have been identified and discussed, including:

- Historical factors: the substandard quality of the curriculum that was delivered in African languages under the Bantu Education Act,
- Economic factors: concern for the post-schooling job prospects for learners in a global economy believed to be dominated by English
- Policy design issues: e.g. forms of language recognized for schooling,

- Quality of teachers: e.g. their training, commitment and actual subject knowledge.

Although the factors mentioned above may be valid, the lack of adequately developed learning materials in African languages may be another factor that contributes to such negative attitudes and this is a matter which, with a few exceptions (Ramani and Joseph, 2002; Heugh 2009; Nkomo and Madiba, 2011; Van de Walt, 2013; Antia and Dyers, 2015, Maseko, 2014a & b), has not received much attention. In other words, we do not know the extent to which availability of adequate teaching and learning resources in African languages can influence such attitudes. According to Heugh (2009), the PANSALB data recorded a 88 per cent of people over the age of 15 who chose to be taught in their indigenous African language in addition to English (that is, bilingual education) provided both languages were taught well (see also Heugh 2006). Conducting a survey in Zonnebloem, Cape Town, Heugh (2009) observed negative attitudes towards African languages. However, when interventions were made to introduce an African language (isiXhosa) in the classroom and material were provided in that language, those attitudes changed drastically. Learners participated a lot more and asked more questions in class. This, Heugh saw as beneficial to the learner's cognitive skills. It is in light of this that there was a need to empirically investigate how the challenge of negative attitudes towards the use of African languages can be addressed by making adequate preparations around materials which are perceived by students as useful.

1.3 Research Aims

The main aim of this study is to examine the student attitudes towards indigenous languages in Higher Education before and after the students are presented with learning resources in their own languages (in this case, isiXhosa). This provision of learning material as intervention is given to UWC second year Nursing students as a resource to aid and enhance understanding of their modules in tertiary institutions. Against the background of UWC's existing language policy (accepted by Council in 2003), the study therefore is an attempt:

- to explore and describe the disposition of mother-tongue speakers of isiXhosa towards the use of isiXhosa in higher education;

- to investigate the feasibility of using isiXhosa as a resource for academic development and as a medium of instruction;
- to examine the effect of incorporating isiXhosa study materials into their courses, by gauging students' attitudes towards African languages;
- to identify the discourses or language ideologies that underpin the attitudes of the students;
- to reflect on the implications of providing learning materials in African languages on research around language attitudes and work on educational language policies.

1.4 Research Questions

- What are the initial attitudes of Nursing students (who identify as Xhosa) regarding the use of isiXhosa materials as an additional resource in their studies?
- How can disciplinary texts be created in isiXhosa on the basis of terminology development theories?
- What are the attitudes of the same group of students after they have made use of isiXhosa disciplinary materials?
- What discourses or language ideologies inform the attitudes of the students after intervention?
- If significant attitudinal shifts are recorded, what are the implications for the future use of isiXhosa as a resource at UWC?

1.5 Overview of Chapters

Chapter Two will review literature relevant to contextualizing and guiding the study. Literature will be reviewed on language attitudes, language policy in South African Higher Education, and on terminology. The chapter starts off by defining the attitude concept and highlights its three components. From there, the chapter continues to look at factors affecting attitudes. The final part of the first section reviews literature on attitudes. The second section deals with the definition of language policy. It also links the importance of the language policy

concept to the study. The final part of the section looks at literature on implementation or lack thereof in Higher Education. The final section deals with the theory of terminology development. It looks at how terminology should be viewed and the guidelines on how terms are developed, particularly from one language to another. It finally reviews some of the literature that has dealt with development of terms.

Chapter Three will describe the methodology. The design of the study is described. It is further justified in the chapter why the design for this research was adopted as opposed to other designs. Information will also be provided on how the data was collected and analysed.

Chapter Four will present the processes of developing the isiXhosa terminology and learning materials. The chapter discusses the stages that led to the collection of terms and how the terms were identified. Furthermore the chapter sheds light to the theories of terminology that were adopted to develop terminology. The chapter will further look at what cognitive advantages the text may have conferred. Finally, the analysis of the terms developed is presented in the chapter.

Chapter Five presents findings from the questionnaire responses. The chapter presents results on attitudes of the participants to the use of isiXhosa in their university studies, before and after the intervention. This is done keeping in mind the three components of attitudes discussed in chapter Two. The chapter points out any changes that have taken place in the attitudes of the participants. Furthermore, the chapter presents the results of the test undertaken by participants. Finally, it presents focus group discussion dataset.

Chapter Six provides a context for understanding the findings of Chapter Five by presenting and discussing data on: questionnaires, the test taken by the students, and on the focus group discussions.

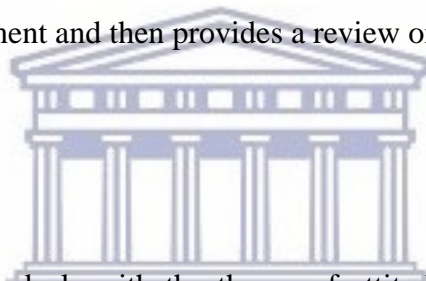
Chapter Seven will discuss the implications of the study on the use of isiXhosa as a learning resource at the University of the Western Cape. More broadly, the chapter discusses the implications of the findings with respect to the university language policy or other educational language policies with regards to teaching and learning using African language(s). This chapter further presents recommendation for further studies.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This study is framed by research in language attitudes, language policy (in South African Higher Education) and terminology development. This chapter is therefore divided into three sections. The first section focuses on the study in language attitudes, unpacking the theory of attitudes and later providing a review of language attitude studies relevant to this paper. The second section looks at language policy as a concept, as well as providing a review of literature on language policy in the context of South African Higher Education. The last section deals with theory on terminology development and then provides a review on studies in terminology.



2.1 Language Attitudes

The first part in this section deals with the theory of attitudes, attitude change, as well as language attitude while the second part deals with the analysis of some of the studies on language attitudes. Baker (1992:18) argues that “much of language attitude research has tended to be a-theoretical and piecemeal in evolution and that there is typically little or no reference to the attitude theory.” In fact, he contends that there is a deficiency in the relationship between attitude research and research specifically on language attitudes. Many scholars have indeed done extensive studies on attitudes, in particular, language attitudes. Bekker (2002), however, suggests that language attitude’s complexity is often neglected not just due to a lack of awareness, but perhaps also due to the unwillingness of many researchers to adopt sophisticated statistical techniques. It is consequently important to begin this chapter by looking at attitude theory in order to recognize the complexity of attitudes.

Katz (1960: 168) refers to an attitude as “the predisposition of an individual to evaluate some symbol or object of his world in a favourable or unfavourable manner.” He goes on to explain that attitudes include affect (feelings of liking or disliking) and cognition, or belief in relation to

the object. This means that attitudes include feelings about a particular phenomenon, either positive or negative. This feeling may be expressed verbally or nonverbally. However, there is a need to recognize that attitudes are also hard to define because of their complex nature and the different dimensions they have. The feeling one may have about a particular phenomenon may not necessarily be determined in a binary way (as in a matter of 0s and 1s – yes or no). There are other aspects of attitude that play a part in determining how one perceives a particular phenomenon in relation to attitude. In terms of cognition or beliefs, Katz (1960) notes that attitudes also include elements, which describe the object of the attitude, its characteristics, and its relation to other objects. However, he argues that while all attitudes include beliefs, not all beliefs are attitudes. For instance, one may hold a certain attitude towards lynching or mob justice, but may hold different beliefs about killing somebody for whatever reason.

Another aspect which Katz (1960) maintains has not been clearly defined in attitude theories, is the attitude's relation to action or overt behaviour. Although behaviour related to attitudes may have determinants other than attitudes, it has an action structure. For instance, while many people may have an attitude of approval towards a certain phenomenon, they may differ in terms of the actions they may take. A good example is an attitude of approval towards one or other political party, e.g. the African National Congress (ANC), on the one hand, and the Economic Freedom Fighters (EFF), on the other. Although people may have similar positive attitudes towards one party or another, they may have a different plans of action, i.e. whether to make a concerted effort to go and vote for either party or not.

2.1.1 Components of attitudes

Baker (1992) concurs with the above definition by Katz (1960) on attitude, as he follows Plato's explication of attitudes as consisting of three components. These components are: cognitive (thoughts and beliefs); affective (feelings towards the attitude object); and readiness for action. Although these components can be distinguished separately, they are however interrelated. This means that one part may be influenced by another even if not overtly at times.

2.1.1.1 The Cognitive Component (thoughts and beliefs)

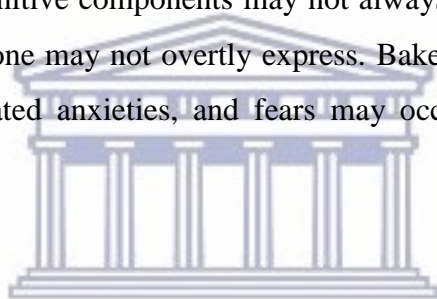
Jain (2014: 6) gives a succinct definition of the cognitive component of attitude as “an evaluation of the entity that constitutes an individual’s opinion (belief/disbelief) about the object.” In order to explicate on this aspect, it is best to establish briefly what is meant by belief, although this is discussed more under attitude change. Underwood (2002) refers to belief as a person’s subjective judgments concerning some aspects of self or of the world. Cognition, on the other hand, can be referred to as the thoughts and beliefs an individual has about an attitude object. Fishbein & Ajzen (1975), cited in Jain (2014:6), express that “a belief is information a person has about an object; information that specifically links an object and attribute.” In fact, Underwood (2002) also admits that, while many scholars tend to distinguish between belief and cognition, cognition encompasses knowledge, opinions, belief and thoughts in general. Knowledge is also another concept that is complex to define even though Aristotle (cited in Underwood, 2002: 105) defined it as “justified true beliefs”. Underwood admits that “parenthetically we must concede that the question of ‘what is knowledge?’ has yet to be given a final answer.” I am bringing the knowledge question up because, according to Underwood’s citation of Aristotle, “people’s attitude towards an object is also influenced by knowledge of the object itself, whether the knowledge of the object in question is a societal construct or not” (Underwood, 2002). What people may hold as basic knowledge influences their subjective judgements about a certain phenomenon and thus their attitudes may be positive or negative. In sum, the cognitive component can be regarded as the beliefs an individual has about a particular object.

2.1.1.2 The Affective Component

The affective component, according to Jain (2014: 6), “is the emotional response (liking/disliking) towards an attitude object.” In other words, the affective component is concerned with feelings about the attitude object. For instance, one may express a feeling of love or hate or even passion about Afrikaans as a language taught at school, as well as anxiety to learn it. Indeed, some researchers tend to place greater emphasis on the importance of affective

components than the other two (see van den Berg, Manstead, van der Pligt and Wigboldus, 2006).

However, according to Jain (2014), an individual's attitude towards an object cannot be determined by simply identifying an affective stance or even beliefs about the object, because emotion works simultaneously with both the cognitive process about an attitude object as well as behaviour or readiness for action. This is because a person may express a favourable attitude towards, for instance, the Afrikaans language, but because of lack of knowledge of the language, may have covert or deep-seated feelings about the language, which may somehow be negative or disapproving. In other cases, a person may express favourable attitudes towards English, as it is seen as a language for mobility, but may hide the negative feelings aroused by the fact that s/he has poor proficiency in the language. These sentiments are also shared by Baker (1992) when he contends that affective and cognitive components may not always be in harmony, because there are these deep-seated feelings one may not overtly express. Baker (1992:6) states therefore that "irrational prejudices, deep-seated anxieties, and fears may occasionally be in variance with formally stated beliefs."



2.1.1.3 Readiness for action

This component, according to Baker (1992: 10), refers to "a behavioural intention or plan of action under defined contexts and circumstances." In other words, it is the stance or the position one is ready to take with regards to the attitude object. For instance, if an individual has a favourable attitude towards isiXhosa, that individual may prefer to go to a bilingual school where isiXhosa is taught. Furthermore, if that individual has a favourable attitude towards isiXhosa as medium of instruction (MoI), that individual might even choose to attend classes where isiXhosa is used as MoI. However, just because one has favourable feelings towards that particular entity, it does not necessarily mean one will take action, for instance, by pursuing that particular entity.

Since attitudes are complex and hard to understand due to the complex and subjective nature of human thoughts, feelings etc., Baker (1992) recommends that attitudes be viewed through the hierarchical structure adopted from Rosenberg and Hovland (1960) with cognition, affective and action as the foundation. The structure below is an illustration of the components in relation to attitudes:

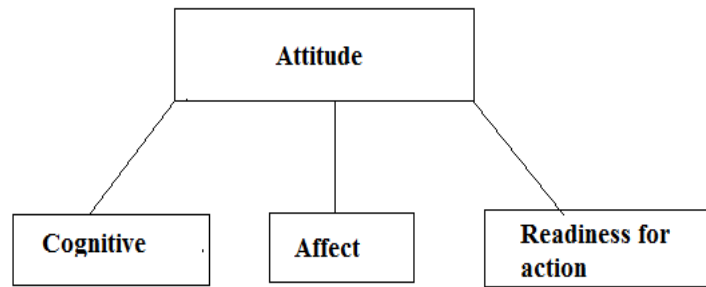


Figure 2.1: Attitude hierarchical structure

The top part in the hierarchical structure represents the attitude and the bottom part represents the three attitude components, as shown in Figure 2.1. Baker (1992) explains that the symbolic object provokes those favourable or unfavourable responsive reactions, and those reactions represent the attitude. It is the attitude that make susceptible or exposes the three components' responses namely, cognition, affect and action to the object responses whose evaluative tone is consistent with the overall attitude.

As many studies have focused on attitudes, second-language theorists using post-structural frameworks have argued that the focus on attitudes alone and their definition(s) may “decontextualize, generalize and objectify”, as they implicitly support “a notion of identity as insular and static, passed down intact over time and across boundaries” (Morgan, 1997: 431). This is because attitudes themselves (with special focus on language attitudes) are drawing from larger social contexts rather than only relying on personal experience. Blackledge, (2004:32, cited in Dyers and Abongdia 2014:4) for instance, sees language attitudes and practices in multilingual contexts as being “embedded in larger social, political, economic and historical contexts.” Therefore, one cannot look at attitudes without considering the social factors that seek to dismiss or maintain beliefs about certain phenomena – in this regard, they are better known as ideologies.

2.1.2 Ideologies

Ideologies are seen as “ways or representing aspects of the world which may be operationalized in ways of acting and interacting in ‘ways of being’ or identities, that contribute to establishing or sustaining unequal relations of power” (Fairclough and Fairclough, 2013: 8). In other words, ideologies can be seen as representations which, through ‘acts’ or ‘being’ in a group, help to sustain or maintain power relations in the social world. The above definition also suggests that ideologies cannot be separated from power relations. Dyers and Abongdia (2014) also emphasize this point, that ideologies cannot exist outside of the power relationships in any society. This is because, according to Dyers and Abongdia (2013:5), “the dominant groups in a society have, over lengthy periods of time, established the existing arrangements in that particular society so that everyone, even the dominated groups, come to see such arrangements as normal and natural.”

The naturalization of these arrangements are also seen in Myers-Scotton’s (2006:135) definition, when she defines ideologies as “patterns of belief and practice, which make some existing arrangements appear natural and others not. To a dominant majority, existing arrangements almost always seem ‘natural’, because they (or their forebears) are the ones who put these arrangements in place.” By referring to ‘they’, Myers-Scotton refers to those in power or dominant groups who have orchestrated these arrangements. In other words, the dominated group is manipulated to see these arrangements as natural so much that they are seen as assumptions or what Fairclough (1989) refers to as ‘common sense’ in terms of the organization of social, economic and political class. Fairclough emphasizes that those assumptions “directly or indirectly legitimize existing power relations” (Fairclough, 1989:23). According to Fairclough, this is done through coercing the dominated group to go along with the dominant group by either exerting ultimate sanctions of physical violence or death, or through winning others’ consent or at least submit to their possession and exercise of power. What contributes to this coercing or consent is the dominated group’s need or desire to associate with the dominant group.

However, it is important to highlight that while this study is on language attitudes, Pavlenko (2004, cited in Dyers and Abongdia, 2013: 7) notes that many scholars have shifted to language ideologies. Since Katz (1960) regards attitudes as subjective feelings, cognition or beliefs about

certain objects, we can then acknowledge that attitudes are not only influenced by personal experiences, but also external factors surrounding the individuals. Therefore, when one attempts to evaluate language attitudes, those who are evaluated tend to draw from the language ideologies. Moreover, ideologies about language are not just about language, but reflect issues of social and personal identity (which includes social status). This can be seen through actual linguistic practices, i.e. how people talk, what they say about languages, the language choices they make for themselves and their children, in what domains, and what they regard as essential languages for both survival and advancement in terms of employment opportunities and social standing (Dyers and Abondia, 2014:6). In similar vein, Da Costa, Dyers and Mheta (2014: 13) regard language ideologies as “shared beliefs about language varieties that develop over time in societies and which shape the way people view those varieties and their speakers.” For instance, if people view a certain group as prestigious, they are likely to see or view the group’s language as also prestigious to an extent that they would want to associate themselves with that language and its group.

In as much as attitudes can be influenced by ideologies and many scholars may have shifted to language ideologies, studies based on the attitude theory language attitudes as are still explored. In fact, some scholars still prefer to conduct their studies based on the language attitude concept. This is also echoed in Dyers and Abongdia (2014:7) when they contend that “many scholars still draw on the concept of ‘language attitudes’.” This is because as Dyers and Abongdia (2010: 120-123) maintain that studies in language ideologies and language attitudes overlap in two areas. Firstly, “both deal with the issue of status and how this affects patterns of language shift and maintenance in societies; and secondly, according to Kroskirty (2000), there is a multiplicity of language ideologies which effectively captures social divisions within socio-cultural groups” Dyers and Abongdia (2010: 120-123). In this way, language ideologies tend to evaluate a broader perspectives or beliefs of society while language attitudes tend to evaluate individual perspective or beliefs, making studies on this concept still relevant.

In the next sub-section, the factors influencing the developments of attitudes, particularly in the context of South Africa, are briefly explored.

2.1.3 Factors affecting language attitudes

Attitudes as part of a person's value system are informed by contextual factors. These factors may be deeply ingrained, so much so that they become part of the belief system or the worldview of an individual. As a point of departure, this thesis considered the negation in attitudes on the use of African languages, especially in higher education in South Africa, and the factors leading to such negative attitudes. Five key factors are discussed below.

- Historical factors

St Clair (1982:164) argues that “to understand fully how language attitudes work, it may be necessary to reach back into the past and investigate social and political forces operating within the history of the nation.” As much as there are different reasons why people hold certain language attitudes, historical factors can be seen as one of the major contributors to attitudes whether on language or any other phenomenon. For instance, in the South African context, education that was delivered to the African language speakers was of substandard quality under the Bantu Education Act (Kamwangamalu, 2000). Bantu Education Act No 47 was a form of mother-tongue education legislation which was introduced in the 1953 and also dubbed the “Slave Education Act” (Kamwangamalu 2000: 125).

Mother-tongue education then was at the core of the apartheid language-in-education policies. Its campaign was driven by the apartheid government's philosophy of Christian Nationalism, where churches were given a mandate to propagate notions of separate identities as God's given order (Kamwangamalu, 2000). Mother-tongue education therefore, was designed to ensure segregation amongst different ethnic groups under the belief that “God [had] willed it that there [should] be separate nations each with its own language, and that mother-tongue education [was] accordingly the will of God” (Malherbe, 1977:101 cited in Kamwangamalu 2000:124). This was the start of negative attitudes towards mother-tongue education, as it became associated with sub-standard education. Ultimately, it was seen as a tool to restrict the social and economic mobility of black people and furthermore, a part of their enslavement to ensure that speakers of indigenous African languages would not be fluent in English or Afrikaans and thus would not gain access to well-paid jobs.

- Job prospects upon completing university

Another factor contributing to negative attitudes is the concern students have for the work they will be employed in after university, in a global economy, which is dominated by English. The fact that African languages have not been accorded enough space (if accorded any at all) in the job market is the reason for its speakers' anxiety. If these languages were treated as 'marketable', language users would need to know what African languages, if adopted as media of learning, could do for them in terms of upward social mobility (Kamwangamalu, 2010; Antia 2015). Indeed, even those who are keen to take African languages as a subject at university, wonder where these languages can be used in professional fields after the attainment of the degree or diploma in their respective fields. In fact, because of the education landscape of South Africa, it is likely that many companies can assume that anyone who obtains a tertiary degree or diploma is very proficient in English. Kamwangamalu (2010) echoing Bamgbose (2007) postulates that:

It is not surprising, as Bamgbose (2007) notes, that even when a language policy makes it possible for African languages to be studied in the school system, students still do not willingly opt for them because they know that a qualification in an African language does not confer as much opportunitie and advantage, if any advantage at all, for upward social mobility as a qualification in a western language such as English, French, or Portuguese (Kamwangamalu, 2010: 13) .

This leaves anyone who wishes to pursue studies in African language at a disadvantage, thereby magnifying negative attitudes towards African languages.

- Policy formulation issues

Lewis (1981: 262) cited in Baker (1992:10) argues that any policy for language, especially in the system of education, has to take into account the attitudes of those likely to be affected. While marginalised languages in the context of South Africa, for instance, are afforded space in the academic arena, the reality is that they are rarely in spaces for which they are designated. English seems to take the leading role and even though the previously marginalised languages

have been given space through policies. Although the policies seem to cater for such previously marginalised languages, the fact that they are not implemented retains the idea that these African languages lack importance. The lack of importance of African languages magnifies the nullification of their use, and results in negative attitudes.

Beukes (2009: 45) also adds that “in education the impact of the belief that African languages have little instrumental value while English is perceived as the language of aspiration, is significant.” The high value attached to the English language is antagonizing the so called ‘rosy language policy’ as English has gained more prestige even amongst the speakers of African languages. It continues to dominate in higher education despite the formulation of language policy that is intended to promote African languages. In other words, African languages continue to be marginalized in education, and the failure to implement these language policies in order to promote these languages is another contributory factor to negative attitudes towards their use in education.

- The structure and status of the language itself

According to Banda (2008) attitudes towards African languages are also affected by issues of language ownership and the perceived purity or lack of purity of a particular language variety, with more so called 'custodians' of the language being against any form of language borrowing. What is also worth noting are the tensions between standard African languages and urban vernaculars, with many learners claiming that standard African languages are difficult to learn (see Somhlahlhlo, 2009). However, for most students in contemporary South Africa, urban vernaculars are used as languages for communication. Makoni (2010), for instance, argues that in sub-Saharan Africa, there are strong suggestions that the majority of the population use urban vernaculars or hybrid varieties and that these varieties are indeed “the” mother-tongue of most school-going children (Calteaux, 1996; Cook, 2006; Makoni, Brutt-Griffler, & Mashiri, 2007; Mungai, 2008).

Makoni argues that education seems stuck in a standard-language ideology that associates urban vernaculars with low socioeconomic status and lack of education, yet some researchers have argued for the use of urban vernaculars as languages of instruction (Calteaux, 1996; Cook, 2009). There is also a problem of what Kamwendo (2002, 2003 cited in Banda, 2008) calls the

‘myth’ of language ownership. According to Banda (2008:46), this is where “individuals feel they own a particular language and that any changes to the writing system have to be sanctioned by them.” Such ‘cultural custodians’ (Antia and Dyers, 2016) are generally strongly against the use of urban vernaculars in education, despite the fact that most learners struggle with an almost alien ‘standard’. Such conflicts contribute to the preference for English over African languages in education.

- The role of English as the language of prestige and upward mobility.

English indeed is viewed as the language of prestige and upward mobility in South Africa and globally, which has led to its hegemony in the work place. This exclusive hegemonic use of English in many sectors has led to a situation where people have “capitulated to the power of English... and (the belief) that it is...essential in helping them to succeed in life, socially (in terms of status), educationally and economically,” (de Klerk, 2002:10). In De Klerk’s 2002 study, for instance, she observed a number of parents preferring to send their children to former ‘Model C’ schools where English was used as a medium of instruction. They believed that “English would open the door to more job opportunities and equip their child [sic] with a competitive edge,” since it is the “... language most used in the workplace’ and the language of science and technology(De Klerk, 2002).” This instrumental worshipping of such a language gives rise to sacrifices, where people would rather see their native languages die. In fact, they would rather send their children to an English only school at a very young age in order to make sure that by the time they are older, they too seem prestigious since English is associated with prestige (see De Klerk, 2002). The danger of the hegemony of English is that it augments the devaluing of African languages which may lead to the diminishing of such languages and consequently the development of negative attitudes.

The five factors discussed above offer substantial reasons for the negative attitudes towards the use of African languages in higher education especially. But can such attitudes be changed? In the next sub-section, the concept of attitude change is discussed.

2.1.4 Attitude change

Attitudes are developed through an individual's socialization process. An individual's socialization process includes his or her formation of values and beliefs during childhood years, influenced not only by family, religion, and culture but also by political and socioeconomic factors. This socialization process affects a person's attitude toward for instance, social strata entities like work, language or even economic and political discourse. Therefore, it is important to understand the influence of dominant societal ideologies on the individual. Despite this powerful influence, Dyers and Abongdia (2014:7) argue that "subordinate groups also have their own ideologies and may develop counter-discourses to the ideologies of the powerful." In terms of attitudes to languages, such counter-ideologies can be seen especially when language revival takes place among groups that have regained their sense of identity and self-esteem (as can be seen in the revival of Native American languages when tribal lands were returned to the different nations).

This is why St Clair (1982:164) argues that "to understand fully how attitudes work, it may be necessary to reach back into the past and investigate social and political forces operating within the history of the nation." Consequently, in order to change a person's attitude you need to address the cognitive and emotional components. According to Katz (1960), the simpler the attitude in cognitive structure, the easier it is to change. This means, an effective change to one component will lead to an effective change to another, as long as the attempts to change attitude are directed at the belief component if not at the feeling or affective component of attitude. But he maintains that we cannot predict when or how these attitudes, especially language attitudes, can change unless we know or understand the psychological need the attitudes satisfy. This thesis is an attempt to prove that negative language attitudes can, if exposed to particular influences related to the cognitive and emotional components of attitudes, be changed to more positive ones.

2.1.5 Measuring Attitudes

Baker (1992: 6) argues that an attitude survey "provides an indicator of current community thoughts and beliefs; preferences and desires." He continues to say that it also provides social indicators of changing beliefs and changes in policy implementation. However, he also contends that attitudes are very hard to measure. This is because the cognitive and affective components of

attitude may not be in harmony. A person, for example, may express overtly favourable attitudes towards education in African languages but may have covert negative feelings about such education. Baker (1992: 11) also points out that “in attitude measurement, formal statements are made reflecting on the cognitive component of attitude and that doubt has to be expressed whether deep-seated or private feelings are really communicated, especially when incongruent with preferred public statement”. Basically, even if attitudes are stated overtly, they may hide covert beliefs. This is because although attitudes are based on individual beliefs or affective emotions towards that certain phenomenon, they are encapsulated by ideas held by society. Baker, therefore, suggest that a good measurement of attitudes need to encompass the full range of issues and ideas involved in an attitude survey. A full range, would be the participants' background, the kind of school the participants attended, age, etc. The importance of such variables may sometimes be directly or indirectly linked to how the attitude was built in the first place. However, this may also depend on what is ranked as important or not important in one' study. This is because of the complexity of attitude measurement alluded above. As a result, in addition to questionnaires, Baker argues that there should be follow-up interviews that will provide explanations about why a person holds such attitudes.

2.1.6 South African studies on language attitudes relevant to this thesis

In this sub-section, some attitude studies conducted with respondents in secondary and higher education in South Africa, are unpacked. These have been selected because of their relevance to this thesis.

2.1.6.1 Studies focused on high school learners.

Studies conducted by Heugh (2009), De Klerk (2002), Barkhuizen (2002) and Ngidi (2002) are of direct relevance to the study on which this thesis is based.

Heugh (2009) conducted a study in Zonnebloem Nest Senior School, an English medium school found in Cape Town. The linguistic profile of the school was diverse, consisting of: 64 per cent isiXhosa first language speakers; 21 per cent English first language speakers; 2 per cent reportedly English-Afrikaans speakers; 3 per cent isiZulu first language speakers; 3.3 per cent

Sesotho, Setswana and Sepedi first language speakers; and a few Portuguese and French speakers also present in the school. However, according to Heugh (2009), teachers believed that many of those learners who positioned themselves with English did so out of aspiration. As in many schools that were previously Model C schools, English was taught as a first language to all students, while isiXhosa and Afrikaans were taught as if they were learners' additional languages. However, the school principal and teachers of Zonnebloem acknowledged that the majority of students did not fare well in a monolingual English medium context. Yet, it was this very context in which the students and their parents had vested interests.

The principal of Zonnebloem Nest therefore tirelessly pleaded with the department of National/Provincial Education to revise and implement a language policy that would represent the demographics in his school. Upon such a plea, he later “realized that it was unlikely that immediate solutions would arise from within the education system”, and thus “set about initiating school-based change” (Heugh 2009: 102). In doing so, he sought advice from a University of Cape Town-based unit, the project for the Study of Alternative Education (PRAESA). This resulted in a ‘systematic’ dual-medium, bilingual teaching attempt of History and Geography in school, focusing on the new Grade 8 intake of learners from 2004 onwards. The grade 8 learners were divided into two classes. One class was taught in English only, while the other was taught in English for most subjects except geography and history. This way, the classes were referred to as English-English (E-E) class and Xhosa-English (X-E) class.

As with the study on which this thesis is based, an initial survey was conducted on the learners' attitudes. This was followed by the intervention of systematic dual-medium teaching, and then a follow-up survey was conducted regarding the learners' preferred LOLT. The follow-up study showed a significant change in the attitudes of the learners towards receiving their education in both Xhosa and English. Heugh's study showed that the support for English as the sole LOLT by many African language speakers may be resulting from historical influences. Therefore, the perception of English in the study is seen as representing an instrumental tool for upward mobility and what Heugh refers to as “surface public layer/s” (Heugh, 2009: 110).

In fact, many African language speaking learners are being sent to English medium schools because English is seen as a language of prestige, as a study by De Klerk (2002) showed. De Klerk found that Xhosa parents were increasingly sending their children to such schools, and

were in general strongly opposed to the idea that isiXhosa could also be used in the education of their children attending these schools. Many were strongly outspoken about their attitudes towards isiXhosa, saying, among others: “It's fine to let it [Xhosa] die. We have never teach [sic] our son any Xhosa, I don't think there will be a need to be a Xhosa-speaker later on” (De Klerk, 2002:9). For some, there was a sense of defeat, so much so that there seemed to be nothing that could be done, as expressed by one respondent: “I would like her to see herself as a Xhosa-speaking, but already I can say she sees herself as an English-speaking person and there is nothing I can do” (De Klerk, 2002:9). De Klerk concluded that:

If Xhosa became a recognised major medium of instruction, its range of societal functions would grow, along with its prestige; the language would develop the necessary lexical resources, its literature would grow, text book resources would improve. A natural consequence would be greater pride in and loyalty to the language. Being the numerically dominant language, it would begin to hold power and attractions, which would positively influence the kinds of language choices parents have begun to make (De Klerk, 2002:12).

Barkhuizen (2002) carried out a study aimed at discovering high school students' perceptions of the roles played by isiXhosa and English in their educational lives. The study was conducted from the premise that “language learners do have valid beliefs about their experience and given the chance they will articulate them” (Barkhuizen, 2002). When his respondents were asked which language they enjoyed, found easier, and useful, there was a high proportion of English in all three variables. Although a high percentage of student found that it was important to study isiXhosa, expressing a strong relationship between language and identity, almost none of them saw any functional value in it. Only 8 per cent believed isiXhosa would help them get a job and 11 per cent felt it had any value for further study. The study further confirmed the commonly articulated beliefs that African language speakers do not find it necessary to study African languages at school because “they already speak it” (Barkhuizen 2002:506). In his concluding remarks, Barkhuizen highlighted and linked the implications of his findings to language policy and suggested that perhaps policy makers should either explore the Xhosa/English medium or look at the kind of variety that is used in the classroom, which adopts code-switching.

Finally, the study carried out by Ngidi (2002) at schools in Kwa-Zulu Natal, also provided more evidence of the negativity among learners, teachers and parents towards the use of African languages in education. For instance when they were presented with the statement whether they enjoy teaching in English, 97% of them agreed. Despite the fact that 60.1% of learners who did not see the English language being a barrier in studying content subjects, 87.8% of the teachers felt that they were sometimes compelled to code switch when teaching the learners of isiZulu language. In fact educators found coded switching to be the resort when asking questions for revision. Moreover educators (60.7%) do admit that learners always have a problem when writing projects in English.

However, despite the problems indicated by educators such as the difficulty that learners find in writing projects in English and the fact that they resort to code switching, 99% of the parents felt that their children are able to perform at their best because the English language is used for teaching and learning. This illusion is further amplified in the statement that teaching in the English medium contributes to high failure, where 72.2% disagreed with such a statement. Further amplification of the desire to associate with English was also seen when parents (72.2%) were reported to disagree with the statement that the mother tongue is the best language for learners to understand lessons taught in class. For a group (99%) that seemed to believe that their children were able to perform at their best because of English, it was surprising to observe that 89.5% of the parents admitted that some terms need to be clarified in order for learners to understand the questions in term tests or exams.

Ngidi's study does not differ much from the studies that have been reviewed in this chapter. In fact it also shows that it is not just the learners that have negative attitudes towards African languages but also parents as has been observed in De Klerk (2002). For many it seems that English is associated with intelligence. Perhaps an illusion coming from those who are not sitting in class therefore not seeing the challenges faced by learners but being influenced by language ideologies. This argument is also shared by Barkhauzen (2002) when he expressed that learners do have the valid beliefs about the experience and can articulate them.

2.1.6.2 Studies focused on tertiary students

Of relevance to this study was the research carried out at universities by Condua (2003), Dyers (1997), Dalvit and De Klerk (2005) and Hlatshwayo and Siziba (2013).

Condua's (2003) study investigates the attitudes of selected groups of staff and students at the University of the Witwatersrand (Wits). The questions asked were:

- An African language should be introduced in addition to English as languages for teaching and learning at Wits University.
- Would you like to see both English and an African language as languages for teaching and learning (media of instruction) at Wits University? Yes/No.
- Zulu or Sotho should be the African language chosen for teaching and learning (medium of instruction) at Wits University. Yes/No.
- There will be more significant improvement in students' academic performance if an African language is introduced in addition to English for teaching and learning at Wits University? Yes/No.

The first years responded to the first question, and the third years and academic staff responded to the second question listed above. From the third year responses, it was clear that they were open to the introduction of African languages next to English, with 64 per cent agreeing to the suggestion, while 27 per cent rejected it, and 9 per cent were indifferent. Although 42 per cent of first year students agreed with question one, 24 per cent remained neutral leaving 34 per cent welcome to the idea. However, 69 per cent of academic staff vehemently rejected the idea of introducing African languages next to English, leaving 31 per cent open to the idea.

Condua's study revealed an interplay of views of both students and academic staff to the introduction of African language(s). For instance, there were those students who felt that there was a need for the introduction of an African language(s). Even so, it seems that the students, in particular, did not see the extent to which they stretched themselves in order to reach the required level of English competence, prior to understanding the subject. They needed to have an adequate level of English competence before they could acquire the knowledge of concepts in their particular fields. As a result, one respondent was recorded as saying, "even people

[students] who cannot speak English very well should make an effort to improve on that ...” Although it may not be clear in which group the student belongs, the results showed that first year students seemed to reject the introduction or use of African language(s) in the classroom in higher education. This rejection of introduction of an African language can precisely be linked to one of the factors affecting negative attitudes towards African languages mentioned above. In fact, this can be linked with the role played by English as language of prestige and upward mobility. Ultimately, it was clear from this study that the introduction of an African language is not seen as a positive mechanism that could help combat problems faced by those who are less proficient in English. This also emerged in an earlier longitudinal study by Dyers (1997) which showed that students have a desire to be associated with English.

Dyers (1997) examined the language attitudes of Xhosa students at the University of the Western Cape in Cape Town. This was an attempt to see how students felt about their own and all other South African languages. This was to see whether over a long period of time language attitudes and preferences remain fixed or became more flexible as a result of the influence of a variety of factors such as identifying with one’s language group or one becoming more exposed to a wider range of opinions on language. Dyers wanted to explore whether, over a period of three years, UWC students would show any change in their attitudes and preferences as they progressed through university, and how such changes would influence language use. Her study showed that the respondents saw African languages as being suited only for use in primary and secondary school, but not when it comes to universities.

Of interest though, was that, while respondents seemed to associate English with higher functions, even 80 per cent of them preferring English to be used in tutorials, they were observed using their mother-tongue with fellow mother-tongue speakers in class. From this, it seems as if they simply were reluctant to acknowledge that they still use their mother-tongues to, for example, simplify concepts. From Dyers’ point of view, the respondents seemed to prefer home language in informal interpersonal conversations and relaxation. The belief therefore, that, African languages are associated with informal settings or should be used at home or for cultural activities was evident in this study. This can be seen in the instances when students were observed using their mother-tongue in classrooms. This points out that while attitudes may overtly be expressed, there are those deep-seated feelings the respondents may have, which in this case would be the use of mother-tongue in class when the students overtly expressed English

preference. Furthermore, the overtly expressed attitude towards English can be linked to the role of English as a language of prestige. This is due to the fact that many of the students were not proficient in English, which they were associating themselves with. In fact, many of those students' matric results in the previous year were lower than the 60 percent mark, as Dyers (1997) reported.

Dalvit and De Klerk (2005) investigated attitudes towards the possible introduction of isiXhosa as a LoLT at the University of Fort Hare. Their findings showed evidence of the instrumentality of the English language as a language for upward mobility, a view shared by many scholars in similar studies (De Klerk 2002, Dyers 1997, Kamwangamalu 2000, Webb 1999 *et al.*). The findings are in line with the factors affecting negative attitudes mentioned above where English is seen as language of prestige. Furthermore, Dalvit and De Klerk observed that English was seen to be associated with the real world (workplace and presumably western economic system) unlike isiXhosa which was clearly associated with Xhosa culture. However, they noticed some misconceptions which seemed to be endorsed by students when it comes to pedagogical advantages of using English as a LOLT:

- The sooner Xhosa children start using English as a language of learning in school, the better.
- Mother-tongue instruction impedes the development of English proficiency
- Knowledge acquired in one language cannot be transferred to another.

In fact, Dalvit and De Klerk noticed that these misconceptions were taken by students as given facts.

The results show that students seemed to have positive attitudes towards isiXhosa. Nevertheless, the need for the respondents to associate with isiXhosa was for integrative purposes. For instance, in the interviews, the use of isiXhosa was considered more appropriate to informal domains, such as family and peer group communication, as was the case in the previous studies. In spite of this, the use of isiXhosa was reported to play a very important role in the academic context in supplementing explanations in English, both in lectures and tutorials. However, the instrumental value of isiXhosa in the academic context did not seem to challenge

the dominance of English. In fact, the additional use of isiXhosa was considered more appropriate for first year students than in the years that followed.

Another study worth mentioning was conducted at the University of the North West by Hlatshwayo and Siziba (2013). They conducted a study to observe the linguistic and academic preparedness of students entering the university. About 71 per cent of their participants were Setswana first language speakers, while the remaining 29 per cent shared linguistic representation from the other ten official languages. As seen in previous studies where English took preference, considerable number of students (53 per cent) preferred to be taught in English. Interesting is the fact that about 26 per cent of the remaining 47 preferred to be taught in Setswana. In fact, what is more interesting is that, when asked whether they would prefer to be taught in Setswana if it had developed terminology ready for teaching all the other subjects, over half (53.91) showed a preference for Setswana.

In conclusion, this section has dealt with studies on attitudes. It is clear that English has taken the leading role as a language preferred by many African language speakers. From the studies discussed, it is clear that the desire to associate with English does not equal proficiency in English. In fact, as seen in the Dyers (1997) as well as Condua (2003), many students' association with English was for aspirational reasons. The interesting part in the studies though, is the negative attitudes towards mother-tongue African languages, even though many scholars have advocated the benefits of mother-tongue education (see Alexander, 2003, Kamwangamalu, 2010 *et al.*). Many students see African languages as only suitable for cultural activities (Ngidi, 2002), maybe for literature, but not for epistemological access. Some parents have expressed that they would not mind if an African language died, as long as English remained (De Klerk, 2002).

However, there were also promising signs where some students showed positive attitudes towards African languages. Heugh's study showed that the learners' attitudes changed after an African language had been used in the classroom, an overwhelming number of students welcomed it and wanted to see African languages being used even in examinations. My study therefore adopted similar strategies to that of Heugh, by investigating attitudes pre- and post-intervention. However, my study focused on higher education, by investigating how different or similar the attitudes were towards the provision of IsiXhosa materials among a selected group of Nursing students.

2.2 Language policy in South African Higher Education Institutions

2.2.1 Defining language policy

Baldauf and Kaplan (1997: xi) define language policy as “a body of ideas, laws, regulations, rules and practices intended to achieve planned language change in the society, group or system”. Baldauf and Kaplan’s definition seems to capture the notion of language planning. They argue that these two terms have been used interchangeably, or sometimes in tandem, while language planning and language policy represent two systematized language change processes. The exercise of language planning, they argue, leads to or is “directed by promulgation of language policy” (Baldauf and Kaplan, 1997: xi). Language policy therefore, can be regarded as an effort, either by government or related parties through legislation, court decisions, executive action or other means to regulate the use of language(s) by a society, group or system.

What is important to note is that, according to Ngcobo (2007: 159), language policy is “objectively designed to maintain ethnic diversity and this may include elevating the status of previously marginalized languages.” Although we may understand language policies as efforts to enhance the status of languages in the community, sometimes such policies may be designed to maintain these languages or even to suppress them (Antia, 2000). For instance, when the decision was made to make English and Afrikaans the official languages in South Africa in 1948, the decision was made purely to maintain the status quo of Afrikaans and English, which were the official languages since the era of what Alexander (2000) regarded as ‘Millnerism’. In the same vein, the decision not to include indigenous African languages was a design to suppress them.

Ricento (2006: 9) argues that “ideologies about language generally and specific languages in particular have real effects on language policies and practices, and delimit to a large extent what is and is not possible in the realm of language planning and policy-making.” It should be clear, therefore, that ideologies and attitudes play an important part in language policy designs. The policy makers’ decision about which language to use and where, is largely influenced by their personal interests and their ideologies. These personal (mostly political) interests, ideologies and attitudes cannot be separated from the histories of policy makers and/or politicians drafting the policy. Dyers and Abongdia (2014: 4), for instance, argue that “language policy...cannot be

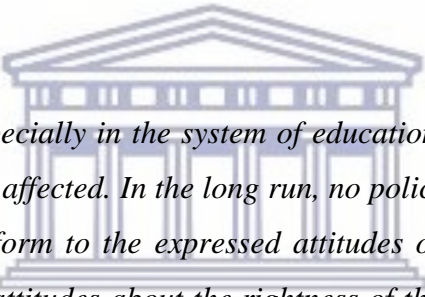
detached from the politics and history of either the country or institution which draws up such policies.” This is because these ideologies that influence language policy makers may be incongruent with the aims and what may be stipulated in the policy. In fact, Ndhlovu (2008: 65) argues that, while in South Africa the documented policy of eleven official languages has given an impression of wider representation, “it continues to be underpinned by the philosophy of linguistic homogenization”:

There also continues to be loud objections from some sections of local communities that have seen the fortunes of their languages decline under postcolonial language policy regimes. While South Africa’s documented language policy states that there are 11 official languages (nine of them are African languages), which should enjoy equal functional and institutional status, actual patterns of language use have retained and entrenched the exclusive use of English and, partly, Afrikaans as media of communication in mainstream economic, social and political domains. This effectively means that the hidden language policy of South Africa is one that recognizes English and Afrikaans as official languages (Ndhlovu, 2008: 62).

The use of a hidden policy in Ndhlovu’s statement suggests that, while there may be an official language policy that may have been documented, the actual implementation may never be the intention. Instead, the hidden agenda enabled the inclusion of nine other official languages in the language policy which, to an extent, are not fully operational when compared to English. In fact, according to Ndhlovu (2008: citing Roodt 2003: 2), the inclusion of nine other languages has “been paraded as part and parcel of the strategy deployed by the pro-English postcolonial elites in their quest for breaking down the perceived wall of Afrikaans.” As a result, the language policy of South Africa has attained ‘eulogistic epithets’ amongst many scholars even from around the continent as “the new very enlightened policy on languages” (Wa Thiong’o, 2003: 3); “an apparently very generous language policy” (Satyo 1999: 150); “the most democratic on the continent” (Chisanga 2002: 101). In other words, language policies can be formulated not necessarily on the idea to elevate the previously marginalized languages, but instead may be

influenced by ideologies to which language policy makers may conform to in formulating the policy.

Such ideologies that influence the decisions by policy makers to include or not to include certain languages, may lead to policy failures. This is because the decision to include certain languages may also rely on the community's perception of their language. Sometimes, it may happen that those people whose languages are meant to be included may have negative attitudes towards these languages. Baker (1992) also argues that if a community is grossly unfavourable towards bilingual education, or imposition of 'common' national languages, language policy implementation is unlikely to be successful. This is because, as he argues, attitudes are central to the health of a language. Therefore, a survey of attitudes provides social indicators of changing beliefs and chances of success in policy implementation. Baker also cites Lewis (1981: 26) who states that:



Any policy for language, especially in the system of education has to take account of all attitudes of those likely to be affected. In the long run, no policy will succeed if it does not do one of three things: conform to the expressed attitudes of those involved; persuade those who express negative attitudes about the rightness of the policy; or seek to remove the causes of disagreement. In any case, knowledge about attitudes is fundamental to the formulation of policy as well as to the success in its implementation (Baker, 1992:6).

In other words, it is not just the ideologies of the policy makers that contribute to the success or failure of a language policy, but also the attitudes of those who are likely to be affected by the policy. Therefore, if those who are not favourable to the promotion of languages envisaged in the policy, the policy may not be successful. It is on this basis that this study aimed to evaluate the attitudes of the students in order to see whether their attitudes are indeed a contributing factor towards the failure to implement a language policy in HEI of South Africa.

2.2.2 Non-committal clauses and lack of implementation

In South Africa, universities are expected to formulate their own language policies. According to Mesthrie (2008: 326), in 2000 “the Department of Education called upon all universities to formulate a language policy in keeping with the country’s constitution, which had identified eleven official languages, and called for the uplifting of the previously disadvantaged African languages.” This led to the Council for Higher Education adopting a language policy framework in 2001. The framework acted as a recommendation for HEIs. Many language policies in these universities seem to follow the suggestions or recommendations provided by the policy frameworks. Such recommendations were in line with the constitution. For instance, the Language Policy for Higher Education (2002), under the heading *Multilingualism in democratic South Africa*, specifically recommended, in two of its clauses, that HEI’s should undertake:

- 3.1.3 *To develop and promote the official African languages and Sign Language/s of South Africa, i.e., Sepedi, Sesotho, Setswana, siSwati, Tshivenda, Xitsonga, Afrikaans, isiNdebele, isiXhosa and isiZulu.*
- 3.1.4 *To support economic development through the promotion of multilingualism.*
- 3.1.5 *To provide for the learning of South African languages by all South African citizens in order to promote national unity and multiculturalism.*
- 3.3 *The ethos of the African Renaissance demands that special attention be given to the development and use of the languages of Africa. The simple fact is that there can be no serious talk of a regeneration of Africa without the full development of the African languages. Higher Education institutions are bound in terms of their traditional research and development function to take the initiative in this regard.*

The visions projected in the above recommendations seemed to recognize the languages marginalized by the apartheid regime. The recommendations were to ensure language redress. The then Minister of Education received positive responses from a number of universities naming the languages that these institutions would undertake to develop. The language policies formulated by HEIs did not disappoint in promulgating ‘rosy ideals’ where the documents seemed to advocate the augmentation of the previously marginalized languages. Needless to say,

the different university language policies are adaptations of the South African Constitutional provision recognizing “cultural diversity as a valuable national asset” and promotion of “multilingualism, the development of the official languages, and respect for all languages used in the country” (Constitution, 1996).

However, scholars who have analysed many universities’ language policies expressed concerns about the inclusion of certain ‘escape clauses’ which were found in these policies. These scholars seem to believe that such clauses found in what would be progressive policies contribute to retarded implementation of language policies. These clauses include clauses such as “wherever it is practicable to do so”, (Neethling, 2010), “concerted efforts” (Hlatshwayo and Siziba, 2013), “unless otherwise negotiated” (University of the Western Cape language policy, 2003), “reasonably practicable” (Drummond, 2016). These 'escape clauses' can be seen as the non-committal wording in the policy that depicts an avoidance to develop the marginalized languages. In other words, institutions easily rely on these clauses to avoid development of indigenous African languages and consequently, implementation of the language policies. Neethling (2010) also mentions that in practice, nothing has been done in the case of the University of the Western Cape to assist the development of isiXhosa and Afrikaans as LoLTs. As an example of such practices, the following sub-section takes a closer look at the UWC Language Policy (UWC, 2003).

5.2.2.1 UWC Language Policy

In 2003, UWC finalized its multilingual policy, identifying isiXhosa as the indigenous language it would undertake to develop, according to Abongdia and Dyers (2014). Its policy seemed to share the visions of promoting multilingualism as seen in its preamble, where the university is described as “a multilingual university that is committed to adhering to and maintaining the linguistic diversity of South Africa” (UWC Language Policy, 2003:1).

However, the policy also states that English is the main medium of instruction at UWC, although in cases like setting tasks, assignments, tests and examinations, it makes provisions for both isiXhosa and Afrikaans to be used alongside English. The policy tends however to constantly use the escape clause, “where it is practicable to do so” (University of the Western Cape, 2003: 1) which effectively ensures that the university can avoid accountability should it choose not to cater for those languages.

Furthermore, it is not clear who is supposed to be responsible for ensuring the implementation of such a policy, as the university leaves it to its faculties to determine the languages each faculty will use in accordance with the multilingual policy of the university. In addition to that, for academic and professional discourses, English takes precedence for “all students will have access to entry-level courses aimed at strengthening their English oral and aural communication skills and improving their academic literacy in English” (University of the Western Cape, 2003: 2). This means one language (English) is seen as superior to others and this makes it close to impossible, if not insurmountable, to challenge its hegemony.

Moreover, while there are phrasal acknowledgements of diversity as well as ‘partial liberty’ to make use of two other languages, the absence of clear plans in redressing the anathema of African language is conspicuous. This is observed in the section under the heading, *Promoting Multilingualism*, where it is stipulated that, with regards to students, “all students will be encouraged through enrichment programs to develop proficiency in Afrikaans, English and isiXhosa” (University of the Western Cape, 2003: 2). The absence of clear plans for implementation clearly shows a lack of urgency in giving life to such a policy. In fact, to this day, none of the programmes that ensure implementation of such policies are visible in the university, with the exception of Antia and Dyers (2016; 2017), who have successfully introduced multilingual lecture and assessment material into the module they teach.

2.2.3 Factors affecting non-implementation of language policy in HEIs

Many scholars (Neethling, 2010; Motasa, 2016; Hlatshwayo and Siziba, 2013; Alexander, 2006; etc.) have shown concern regarding the future of the languages that are meant to be developed as stated in the universities’ language policies. Some of them have pointed out the factors that have led to the lack of implementation of the policies, such as:

- Lack of political will
- Absence of time frames in the policy
- Lack of terminology and funds to be channelled into developing such languages
- Shortage of students learning the indigenous languages
- Non-committal wording in the policy (escape clauses)

- Attitudes by both community (including students) and policy drivers (including lecturers)

I am highlighting these factors because: 1) the factors themselves are interlinked as I will explain below; 2) they link with the previously discussed concept of language attitudes; and 3) they link the study with the theory I will be discussing in the next section, i.e. section 2.3.

2.2.4 An overview of related research conducted into language policies at HEIs in South Africa

In this sub-section, a brief overview is offered on research related to this study. The various papers offer critical insight into the language policies of the various universities. I am looking at randomly selected universities such as University of South Africa, Johannesburg, Western Cape, and North-West.

Firstly, the lack of commitment to implementing language policies has been described as a serious barrier to the use of languages other than English in South African HEIs. This lack of commitment is captured in a comparative study (Drummond 2016) conducted at the University of South Africa (UNISA) and the University of Johannesburg (UJ). The non-committal wording of the policies at these institutions, coupled with the liberal insertion of ‘escape clauses’ allow the universities to sit idle and maintain that there is a lack of resources which in turn impedes their desire to implement what is envisaged in the policy.

Furthermore, Drummond highlights the diminishing number of students from an African language background who are willing to study subjects in their own languages in the university. Although he asserts that the policy wording with regards to this factor is somewhat ambiguous, it seems to indicate that where there is a lack of demand for a module that can be offered in an African language, that module 'should' automatically run only in English. According to Drummond, demand being the key word, “appears to be a factor driving in whether the English-only provision will continue to dominate at UNISA” (Drummond, 2016: 75). A similar situation could be seen at UJ, where the policy states that “there ought to be ‘a reasonable demand for teaching, learning and assessment in a particular language, determined by means of the language preference exercised from time to time by students” (UJ 2006; cited in Drummond, 2016: 76).

From the assessment of language policies from both universities (UNISA and UJ), it appears that Drummond considers ‘demand’ as the hold-on-to feature, i.e. a scapegoat, which allows either of the universities to avoid accountability. This is because ‘demand’ acts as a factor in determining whether or not courses will be available in African languages. In other words, if there is no demand from the students to do the module or the course in an African language, then there is no need to worry about developing such modules in an African language. Drummond (2016: 76) also argues that, if we are to look at universities as markets, “market forces are not likely to be drivers with a sufficiently equitable purpose to reach formerly disadvantaged groups.” In other words, unless the consumers want a different product from what is offered, the different product may not be made available just for equitable purposes. In fact, demand for a ‘product’ which does not yet exist, may be significantly lower than the one which already exists.

According to Drummond, the problematic nature of demand-based provision is associated with the attitudes towards English. This is because, parents themselves are not keen to have their children taught in the children's mother-tongue, i.e. being taught in an African language (see de Klerk, 2002; Ngidi, 2002). Citing Van Huyssteen (2003: 4), Drummond argues that “in much of South Africa, ‘parents strive for their children to be educated in English’” (Drummond, 2016: 76). He argues that, while the universities have been given responsibilities to implement their own language policies, it does not sit solely with them. In other words, if there is no demand from parents and other stake holders which consequently could put pressure on the universities to implement or accommodate the demand, then the situation will remain the same where, the language policies will remain ornaments of the institutions. In fact, Drummond contends that:

It is beyond the capacity of a tertiary institution acting unilaterally to decisively influence the demand for African languages as LOIs in its province. In fact, courses which will only run when there is a demand will never run unless broader status and attitudinal planning fosters that demand (Drummond, 2016: 77).

Furthermore, Drummond argues that “as long as institutions are free to unilaterally determine their language policy independently of primary and secondary institutions, and vice versa, it is

difficult to envisage significant progress towards multilingualism in the nation" (Drummond, 2016: 77). In other words, universities alone are not capacitated to drive the policy or implement it. Tertiary institutions must work hand-in-hand with a broader range of stakeholders as part of a national language planning framework, in order to influence transformation. This, he argues, can be achieved by ensuring that African languages are developed in the tertiary, secondary and primary sectors simultaneously, as part of a national framework, or else the implementation will not succeed.

Neethling (2010) looked at three universities in the Western Cape, namely: University of Cape Town (UCT), University of the Western Cape (UWC), and Stellenbosch University (SUN), and what progress has been made since they formulated their language policies in 2002-3. In his study, he highlights the declining number of students learning the previously marginalized languages (isiXhosa in this case). Neethling notes that "the numbers of students enrolling for first-language study courses in the Bantu languages, have, over the last decade, been dwindling to such an extent that such departments were under threat to be closed down in some areas" (Neethling, 2010: 65). He further postulates that graduates majoring in the African languages are sorely needed, because they are likely to play an important role in any future development of these languages. In addition, he finds "no clear plan to consciously and actively promote isiXhosa at any of the three institutions" (Neethling, (2010: 67). This could be associated with the lack of political will, lack of funding to develop the languages stated to be developed in the policy, and the fact that there are no clear time frames in the policy. He concludes that the "future of the indigenous African languages as mediums of instruction is bleak unless a long-range plan is devised that could be implemented as a concerted effort over the next two to three decades" (Neethling, 2010: 65).

While the more randomly selected universities' study conducted by Mutasa (2015) underscored the issues raised by Drummond and Neethling, Mutasa adds the following factor to the lack of implementation of the language policies: the language choices of universities and perceptions of academics and students, which in turn impact on the process of implementing the multilingual language policies in universities. In his study, Mutasa confirmed the negative student attitudes towards indigenous African languages shown in other studies. He quotes one of the students he interviewed whose response was a typical one when he broached the possibility of studying in Sepedi: "*What! O ngwala Sepedi ko University ya South Africa!* (What! You go to

the University of South Africa (UNISA) to learn and write Sepedi?); *Otla ba eng vele ka Sepedi?*” (What will you be in order to earn a living if you study Sepedi?). As for the lecturers, Mutasa (2015) argues that disregard for indigenous languages is not uncommon among lecturers of content subjects who view content as different from language. He noted that “Sixty per cent of lecturers of content subjects see it as anathema to use indigenous languages in the teaching of their subjects” (Mutasa, 2015: 55).

Furthermore, Mutasa notes unrealistic timeframes by those who are supposed to drive the policy and its implementation, which in turn reveals an avoidance to develop African languages for use in higher education. He reports that they argue that the implementation should be after 50 or 100 years, meaning that their suggested timeframes are undeniably out of reach (Mutasa, 2015). In other words, lecturers also would rather deal with what is available to them than work with what needs to be developed and not readily available.

While language policies are important in redressing issues of previously neglected languages, sometimes the attitudes of those the policy is meant for, needs to be taken into account. Hlatshwayo and Siziba (2013) stress that the success in language policy implementation may sometimes depend on the attitudes of those for whom the policy is formulated. This is based on their work conducted at North West University (NWU). They conducted a study on first year students in North West University, Mafikeng Campus to observe their perceptions of multilingual education. The survey they conducted saw many students change their preference from the use of English to the use of Setswana, provided its terminology could be developed. Hlatshwayo and Siziba suggest that English is a preferred medium of instruction only for instrumental reasons, and if Setswana could fulfil the same role as English, and was recognized in business and wider communication, it would be the preferred medium of instruction (MOI). This means that the ‘laissez-faire’ approach to the implementation of language policy is directly linked with the attitudes of both the policy makers and those that the policy is meant for (Hlatshwayo and Siziba, 2013).

In conclusion, this section has dealt with the concept of language policy by defining and problematizing it within the context of South African HEIs. This section also looked at some of the issues regarding higher institutions’ language policies, such as the fact that there is lack of implementation. The factors that affect the non-implementation of the policy were also

discussed. Finally, the section offered a brief review of some of the studies by scholars looking at the lack of implementation of higher institutions' language policies, highlighting the listed factors affecting non-implementation of policies. A critical issue revealed by these studies which has a direct bearing on this thesis is how important it is to deal with language attitudes and devise ways to change the negative attitudes towards the indigenous languages. However, we need to admit that if implementation of language policy relies on people's attitudes, implementation of language policies will not take place if we wait for such attitudes to change.

The final section of this Literature Review considers another key area impacting the use of African languages in South African HEIs, viz. Terminology Development.

2.3 Terminology

This section focuses on defining terminology, its importance and approaches used in creating terminology. The section also touches on the processes that need to be followed when creating terminology for a particular target language, and concludes with a survey of some of the literature on terminology development in the South African context.

Terms are seen as features of languages as used in specific domains (biology, law, physics, social work, etc.), rather than words employed in the general language (Sager, 1990). Sometimes terminology in this sense is considered as being about knowledge of Greek and Latin, the classical languages from which English has derived many learned words in different disciplines. Antia (2000: xv) counters this perception when he argues that the research community in terminology does not focus on Greek and Latin but on concepts or units of knowledge in specific fields, their features and how they are structured (because these factors often have an impact on what concepts are called); the linguistic (and non-linguistic) labels that are used to represent these concepts, how the concepts and labels are used, learnt, and so on. On his part, Sager (1990: 5) categorizes three ways in which 'terminology' is used:

- “the activity i.e. set of practices and methods used for collection, description and presentation of terms;”
- “theory (a set or premises, arguments and conclusions required for explaining their relationship between concept and the term which are fundamental for coherent activity under 1;”.

- a vocabulary of a special subject field”.

Sager’s first category describes the processes followed by an individual or a team in producing the specialized vocabulary of, for example, a discipline like Chemistry in English and in an African language. There would be a number of activities, including: identifying relevant texts on topics of interest in Chemistry, speaking to chemists to map the field/subfield, understanding and identifying the concepts, their definitions, finding equivalents in the African language, testing the equivalents, deciding on how the terms in the two languages should be presented (in a database, paper form; alphabetically or according to the relations among the concepts) etc. These activities are carried out because there is some theoretical or disciplinary knowledge motivating for the creation of specialized vocabulary.

Sager’s second category deals with this knowledge, that is, terminology as a body of theoretical knowledge that addresses the relationship between concepts and terms of a field. Antia (2000:85-89) points out that the theoretical knowledge in terminology elaborates on the three corners of the semiotic triangle (adapted from Ogden & Richards 1969):

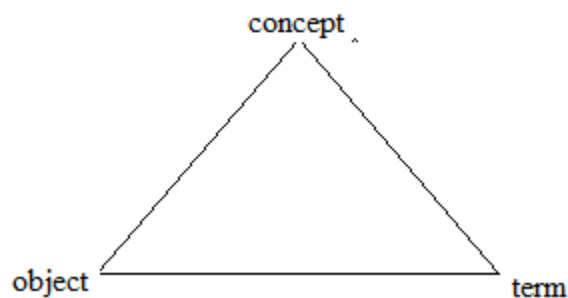


Figure 2.2 showing the relationship between concept and term

In terminology as theory, the object is of interest even though it really has not been the focus in, say, structural semantics (cf. Kleiber 1990 cited in Antia 2000:88). Questions are asked regarding the types of objects in a field (material/ immaterial, abstract/concrete); why different fields may form different objects from the ‘same’ observed reality; and the nature of objects in specialized fields; the features of objects; and so on. Regarding the concept, issues of interest in theory include the processes of their formation (e.g. abstraction) and their relationship to objects;

their types (general, individual); their characteristics; how they are interlinked; how they are defined; and so on. At the level of the term, questions of interest to theory include identifying what a term is; motivation of terms (how terms reflect the characteristics of the concepts); the types of terms (linguistic, non-linguistic, mixed sources, e.g. alphanumeric terms); the formation of terms through various processes (compounding, affixation, semantic extension, etc.) or on the basis of existing forms, modification of existing forms or through creation of new forms; how the terms of a field/subfield give expression to the structure of concepts; the determinants of appropriateness of terms (e.g. principle of economy, respect of structural and orthographical norms, cultural connotations); how terms are used in texts; etc. (cf Sager, 1990; Antia, 2000). From these fundamental aspects of theory, scholars have developed applied theoretical approaches, e.g. methods for extracting terms using text corpora, methods for defining that give expression to the concepts of a field, etc. (Antia, 2000).

Sager's third category has to do with the outcome of the first meaning. When the processes of collecting or creating terms are completed, the result is a terminology or vocabulary of a given field, e.g. the terminology of physics.

Alberts (2010: 600) argues that "terminology plays a pivotal role in language development and the promotion of multilingualism." With the formulation of language policies, which sought to redress the disenfranchised languages, particularly in HEIs, since the calls in 2001, terminology development is at the epicenter of implementation of those policies. In other words, for the policies to be implemented the indigenous languages have to be developed through developing terms. The Language Policy for Higher Education (2002: 15.2.1) also acknowledges that "the promotion of South African languages for use in instruction in higher education will require, amongst others, the development of dictionaries and other teaching and learning materials." Terminology is, therefore a strategic resource and has an important role in such developments. This recognition of the importance of terminology explains the attention the subject has received in initiatives on using African languages in Higher Education, especially those of Antia(2015, 2015b); Antia and Dyers(2016); Ramani and Joseph(2004); Nkomo and Madiba(2011).

My study has drawn more on Sager's first and second categories of terminology, because my work was designed to make available terminology for the production of learning materials in a

specialist field. Although my goal was to use created and available terminology to produce learning materials in an African language, it was possible to do some terminology collection as a by-product of the study. In the next sub-section, the focus is on understanding language/communication for specialized purposes, and why terminology is important in specialized texts.

2.3.1 Understanding language for specialized purposes

The language that is generally known by a wider community is referred to as language for general purposes (LGP) while the language forms in specific fields constitute language for specialized purposes (LSP). Picht and Draskau (1985:26) define LSP as “a formalized and codified variety of language used for special purpose in a legitimate content...with the function of communicating information of a special nature at any level”. Although people may not be familiar with the language of that special field, they still need to understand the language that is used. Picht and Draskau (1985) further note that the purpose of a special field language is to make communication in the special field effortless and exact. They cite Hoffman (1976: 16), who defines LSP, as “a complete set of linguistic phenomena occurring within a definite sphere of communication and limited by specific subjects, intentions and conditions” (Picht and Draskau, 1985: 10). For instance, the general meaning of the word ‘blade’ may be understood as “the flat cutting part of a sword, knife, etc.”, but in Botany, it may be understood as “the leaf of a plant, especially of a grass or cereal” (Dictionary.com).

Below (Figure 1.) is the diagram by Picht and Draskau (1985) that helps to show the relationship between LGP, LSP and terminology.

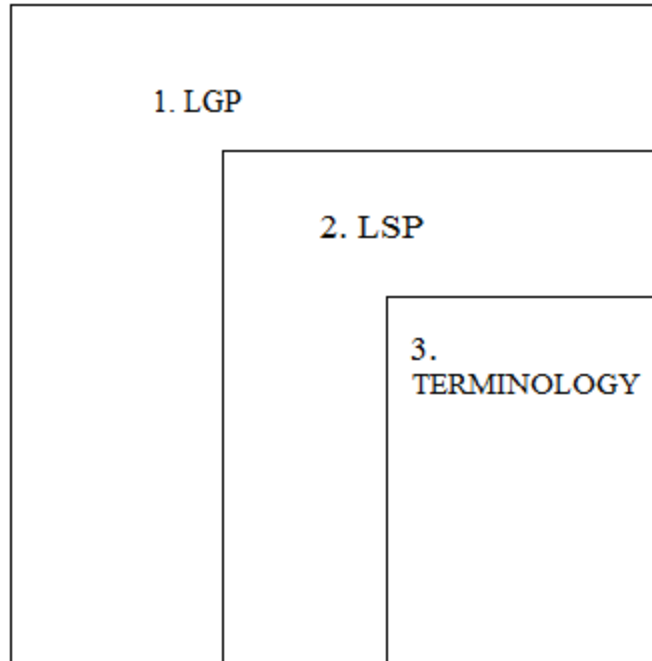


Figure 2.3: Relationship between LGP, LSP and terminology

The box that is the largest in the figure above represents the standard language of a given community as a whole (1. LGP). The second smaller section (2. LSP) represents the special languages, all of which are a part of LGP; LSP can only generate within LGP. They might share some concepts, but LSP also has some concepts that LGP does not have as mentioned above. The smallest section (3. Terminology) represents the concepts and expressions of one special language in particular (Picht & Draskau 1985:22).

Terminology in the third sense is central to the communication of specialized or disciplinary knowledge. This can be illustrated through adoption of an experiment conducted by Antia (2014) who blanks out/eliminates the terms in a specialist text, and shows that what is left of the text is meaningless. In contrast, when general language words are eliminated, and the terms left intact, the text is still understandable to some extent. Consider this text:

██████████ is generally considered the most effective ██████ for cleaning the tight spaces between the ██████. You can also use ██████████ to scrape up and down the sides of each ██████.

Text A

Text extracted from http://www.colgate.com/app/CP/US/EN/OC/Information/Articles/Oral-and-Dental-Health-Basics/Oral-Hygiene/Brushing-and-Flossing/article/Dental-floss-vs-water-pick_Which-is-better.cvsp

From the text above it is not easy to understand what the text is about even to the person who may be the English first language speaker. This is due to the unavailability of the ‘terminology’ for the specific field.

Let us consider the text below:

Standard dental floss [REDACTED] tool [REDACTED]
[REDACTED] teeth. [REDACTED] dental floss [REDACTED] tooth.

Text B

Text extracted from http://www.colgate.com/app/CP/US/EN/OC/Information/Articles/Oral-and-Dental-Health-Basics/Oral-Hygiene/Brushing-and-Flossing/article/Dental-floss-vs-water-pick_Which-is-better.cvsp



With this second configuration, a reader can guess that the text is about the dental floss as a tool for doing something to the teeth. The example above clearly demonstrates the importance of terminology.

2.3.2 Creation of terminology

The process of creating terminology is not a haphazard one. It occurs in a particular environment, e.g. in a research study, laboratory, a design office, a workshop or in any situation where people are in need of new expression forms (Sager, 1990). However, Sager contends that there is a major distinction that needs to be recognized. This distinction is between term creation, which accompanies scientific and technological innovations in any linguistic community, and

that which accompanies the transfer of scientific and technological knowledge from one linguistic community to another. While the former may be spontaneous, the latter can be influenced and engineered. Sager (1990) identifies two major types of terminology creation. These are: primary (monolingual term formation, which may also be provisional i.e. accompanied with stipulative or otherwise temporary definitions); and secondary formation (which occurs when a new term is created for a known concept). The difference between primary and secondary is that the former has less strict rules for the formation of appropriate terms whereas in the latter there always needs to be precedence of an existent term with its own motivation.

Although the primary term formation seems to be the simpler one, I am more concerned with the secondary term formation. This is because, the terms being created for the study already exist in another language, therefore, the terms created are from another language. According to Sager (1990:80), “secondary term formation occurs as a result of knowledge transfer to another linguistic community and is carried out by means of term creation.” In order to ensure the proper creation of the terms, Sager’s (1990) strategy of terminology development needed to be adopted. He recommends three major approaches to the creation of new designations: a) the use of existing resources, b) the modification of existing resources, and c) the creation of new linguistic entities.



2.3.2.1 Use of existing resources

The use of existing resources entails the extension of the meaning of the existing term to embrace that of the new term. In other words, it is where new terms are coined through analogy where the existing designation and meaning is transferred by such rhetorical figures as metaphor. In many cases, the simile tends to be the common way of new term designation, for instance, naming a concept that resembles that entity because of similarities, e.g. ‘goblet-like cells’ refer to cells (in Biology) that resemble goblets. This can be further refined to simply ‘goblet cells’.

2.3.2.2 Modification of the existing resources

Another strategy in term designation is modification of the existing resources. This strategy entails using those terms that exist and renaming or modify them to name a certain entity Sager (1990). This strategy uses different techniques such as:

- derivation/affixation – the process of adding affixes to a term, e.g. changing a verb into a noun;
- compounding – combining existing words into new ones;
- conversion – the morpho-syntactically differential use of terms, e.g. a verb used as a noun or a noun used as a verb; and
- compression – which entails any form of shortening by means of abbreviation, clipping, acronyms, etc.

While creation of terms can be very demanding, sometimes when words are not easily created or lack alternatives, a basic strategy such as borrowing or loaning can be adopted. This strategy is frequently used where the term borrowed is re-adjusted accordingly with linguistic rules of the language which borrows. Sometimes the adjustment is morphological or phonological. This borrowing is adopting words often from fully elaborated languages into a language less developed, as was the case with my study. Borrowing or loaning, according to Ndhlovu (2014: 331), involves “taking words from the source language and applying them in the target language.” According to him (2014), there are many kinds of loaning, such as indigenised loan words, pure loan words, acronyms and abbreviations, acronyms or abbreviations preceded by an explanation, and pure loan words preceded by an explanation.

When isiXhosa uses borrowed words, most of the time it requires one to only use the prefix such as ‘i’, depending on the word class and the word borrowed. In addition to that one needs to change the orthography to that of isiXhosa in order to adjust the word to that of isiXhosa. Let us consider ‘*stoel*’, which is an Afrikaans word for chair, in isiXhosa it is written *isitulo* rather than ‘*i-stoel*’ and the term ‘phrenic’ is used as ‘*ifreniki*’ in the target language. In some cases when one is borrowing one can adopt another technique of borrowing an abbreviated word while maintaining the same phonological production. This is usually called phonological nativization, a

process whereby a borrowed word is adjusted to the native target language and the phonological production is adjusted to that of target language (Owino, 2003).

As with the other two sections of this literature review, I examine terminology studies in the South African context. However, I restrict myself to two studies only, both carried out at the University of Cape Town, which are of direct relevance to my own study.

2.3.3 Terminology studies in South African HEIs.

I find myself in agreement with Madiba (2010: 332) when he writes that “there is still a dearth of research that has focused on the pedagogic value and use of multilingual glossaries at university level in South Africa”.

At the University of Cape Town, Paxton (2009) conducted a study with students who had been involved with the Multilingualism Education Project, which was launched in 2004. The project was aimed “to begin the process of promoting multilingualism in the institutional policies and practices and making the campus more of a home to all students” (Paxton, 2009: 61). The project employed a range of methods, including concept translation, multilingual tutorial groups, interviews and a survey questionnaire to develop a richer understanding of the possibilities for multilingual teaching and learning in English medium tertiary education settings in South Africa.

Students appeared to find the process of offering alternatives to English in their home languages quite a difficult one. Some of the participants were unsure of their proficiency in an African language. They were concerned that their African language is ‘not good enough’ as they said they did not know ‘the deep Xhosa’ (Paxton, 2007). While others were ‘quite confident’, there was still no consensus in coming up with the terms because some members of the groups had different ideas. This illustrates the difficulties in coming up with terms even when one may be the first speaker of that language. For instance, Paxton reports that when there was no equivalence of the term in respective languages, the participants would opt for the ‘township lingo’ (as in the case of the Setswana group) or (in the case of isiZulu group) very lengthy explanations of the concept in that respective language. In fact, Paxton (2007: 65) reports that a Xhosa speaker pointed out that translation of concepts is sometimes complex:

“You sometimes translate things from English to Xhosa and find that it is more difficult in it than it is in English. It gives you a whole paragraph in Xhosa when it is only one term in English”

In other cases, according to Paxton, they often find an alternative concept, which sometimes does not depict the true meaning of the actual concept. For instance, reports on the group of Xhosa speakers as they tried to explain the meaning of the concept ‘deficit’ on their worksheets, they described ‘deficit’ as ‘loss’ in English. Paxton reports that this possibly is because “they could not find a direct Xhosa translation for the concept and so had used the Xhosa word ‘*ilahleko*’ (loss) to explain it” (Paxton, 2007: 65). However, the equivalence of the concept ‘deficit’ is *intswelo*.

Paxton concluded that while the study sought to develop a better understanding of how concepts transfer from one language to another, the findings emphasize that learning is restricted by the use of the second language only. In other words, there is an empirical need for introduction of mother-tongue use in classrooms. This means development of African languages is more than just a necessity. However, she recommends that far more discussion of concepts in the primary language is needed if concepts are to be clarified and misconceptions, identified and eliminated.

Also at UCT, Madiba and Nkomo (2011) proposed a lexicographical approach to the compilation of multilingual concept literacy glossaries, which might play a very important role in supporting students at institutions of higher education. Their project was part of the UCT Multilingual Concept Literacy Glossaries project initiated in 2007 as part of the implementation of the University's Language Policy (1999 revised in 2003) and the Language Plan adopted in 2003. The Language Plan required a development of multilingual concept literacy glossaries that supports students whom English is not their first language. Thus, the glossaries aimed at concept literacy in the different content-learning areas, with the pilot project focusing on developing glossaries for Statistics, Economics and Law.

In their paper, they initially present an argument or justification in using lexical approach to developing terms, arguing that “modern lexicography provides a theoretically sound and comprehensive scope that may facilitate the production of functional and user-friendly products”

(Madiba and Nkomo, 2011: 145). Subsequently though, they maintain that consideration should be given to the texts students encounter in their respective subject areas. This means that the resulting aim was to produce terms for non-English native speakers in order to help them cope with the challenge that English presents to those non-English speakers.

As the main conceptual bases for the glossaries, Madiba and Nkomo explain that the special language corpora were used. They postulate that the corpora were based on generally accepted criteria for designing special language corpora. These criteria include size, text types, publication status, text origin, constitution of the texts, authorship, external and internal criteria. The glossary developed was based on a small corpus, which consisted of prescribed books, study guides and tutorials in Economics. Madiba and Nkomo highlight that although the corpus is small in size, it contained relevant key concepts and their contexts because of the module approach used in collecting texts.

Madiba and Nkomo (2011) provide an analysis of concordances i.e. an alphabetical list of the words (especially the important ones) present in a text or texts, usually with citations of the passages concerned or with the context displayed on a computer screen). They also contend that students also need to learn how to apply concepts in a range of contexts, and that definitions based on concordances are more elaborate and helpful to students than traditional definitions, especially from dictionaries not based on corpora. Ultimately, Madiba and Nkomo (2011: 163) argue that “providing students with mere definitions to memorize, results in a superficial understanding of the concept.”

2.4 Conclusion

This chapter has offered a review of the literature relevant to this study, which rests on the following three theoretical pillars: language attitudes, language policy and terminology development. The literature has provided evidence of the how attitudes and ideologies impact the perception of African languages at South African universities as possible languages of learning and teaching. It has also shown the relationship between existing ideologies and the lack of implementation of language policies at these HEIs. Finally, the challenges of terminology creation for university studies was also addressed, with particular reference to the approaches adopted for this study.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

The purpose of this study is to examine the attitudes of African language speakers towards their own language. Negative attitudes towards the use of African languages in education, especially amongst the speakers of these languages, have been one of the issues contributing to tardiness in language policy implementation. Specifically, the study was designed to determine whether student attitudes towards indigenous languages in Higher Education could be positively changed when they are presented with resources in their own languages (in this case, isiXhosa). This chapter focuses on the methodology used to carry out the research. The chapter is divided into subsections that offer discussion on research design, the research population, the research methods adopted, the intervention, the data analysis, and the ethical considerations. It is useful at this stage to link my research questions to my research design:

- What are the initial attitudes of Nursing students (who identify as Xhosa) regarding the use of isiXhosa materials as an additional resource in their studies?
- How can disciplinary texts be created in isiXhosa on the basis of terminology development?
- What are the attitudes of the same group of students after they have made use of isiXhosa disciplinary materials?
- What discourses or language ideologies inform the attitudes of the students?
- If significant attitudinal changes are recorded, what are the implications for the future use of isiXhosa as a resource at UWC?

3.1 Research Design

My research design was a blend of quantitative and qualitative methods, in order to ensure triangulation of the results. Since I was interested in determining if the provision of learning materials in isiXhosa would cause a change in the attitudes of my research population towards the use of isiXhosa materials in their particular academic disciplines, I adopted a pre-test/post-test design, which is a quasi-experimental research design (Bell, 2010). According to Bell, the basic premise behind the pre-test–post-test design involves obtaining a pre-test measure of the outcome of interest prior to administering some treatment, followed by a post-test on the same measure after treatment occurs. Pre-test–post-test designs can be used with or without control groups. This design is widely used in behavioural research, primarily for the purpose of comparing groups and/or measuring change resulting from experimental treatments. It is also used in medical research for the same purpose. A pre-test/post-test design involves one or more experimental groups that can be exposed to a treatment or intervention and then be compared to one or more control groups who did not receive the treatment. Sometimes, it can involve one group that can be evaluated prior and post exposure to treatment or intervention. In this study, the design involves one group of participants from which “researchers gather data about some outcome through a single pre-test, administer a treatment, and then gather post-test data on the same measure” (Bell 2010: 4). This design, according to Bell (2010), is typically presented as follows: O1, X, O2. O1 represents the pre-test, X represents the treatment while O2 represents the post-test.

The pre-test–post-test design was used in this study because it is well-suited to answering the research questions appropriately and adequately. This is because the design allows for one or more experimental groups to be exposed to a treatment or intervention, and then to be compared to one or more control groups that did not receive the treatment. In some cases, one group is used and is exposed to the treatment or intervention then compared to the instances prior to the exposure. This method allows for the in-depth examination of both the pre-test and post-test.

However, like any other research design, this design has its weak points, such as threats to internal and external validity.

3.1.1 Threats to internal validity

Internal validity refers to the basic minimum without which an experiment is uninterpretable (Campbell and Stanley, 1966: 5). In other words, internal validity asks whether the experimental treatment or intervention did in fact make a difference in the phenomenon measured. In this study, the threat considers whether there are more effects that can cause this design not to yield reliable results with respect to internal validity. Discussed below are some of the threats which Campbell and Stanley (1965) list regarding internal validity and a rationale is provided for the adoption of this design in this study. These are:

3.1.1.1 History

History looks at what is happening at the same time the experiment is being conducted. In some cases, it may be the specific events that may happen between the first and second measurement in addition to the experiment. This pertains to the fact that many events may occur and may to produce the differences in outcomes. These outcomes may not be because of intervention. The outcome may be due to the time the researcher takes to test second group. The longer the time lapse between O1 and O2, the more likely history becomes a threat. This threat is not easily avoided due to sometimes the nature of the research. If the research needs a longer time before the second evaluation, then it is likely that this threat can be unavoidable. However, there is no specific stipulated time between O1 and O2, therefore, if the research requires a longer period, the threat may be unavoidable.

3.1.1.2 Maturation

This refers to the occurrence of effect of change over time that may occur naturally. In other words, the change that may happen could be due to maturing of the respondents rather than the change due to the intervention. This means that in some instances, the entity tested may give results that may not be the product of intervention but perhaps be because the respondents grew tired, hungry, or even irritated. Such threats may be avoided by sticking to the time set but otherwise may not be avoided at all.

3.1.1.3 Testing

The use of the same question on pre-test and post-test may affect how the subjects do at the second testing. This is particularly true in many cases. However, sometimes when the researcher

wants to know whether there was an effect from intervention, the measurements used in the pre-test should be the same as the measurements used in the post-test.

3.1.1.4 Instrumentation

This is a question of reliability in the sense that different examiners may observe or use different ways of scaling which may in turn directly affect the quality of the data obtained. The different ways of scaling are more likely to happen when there are different administrators working on, let us say, participant observation. In such a situation, different researchers may have different ways of looking at one phenomena and therefore grade it subjectively. This study used questionnaires and tests whose responses were uniformly pre-adjudged. In other words, the scaling that were used fell between certain parameters that were predetermined. This way, irrespective of who looks at the responses, they will remain under the predetermined scale.

3.1.1.5 Statistical regression

This is where the groups are selected on the basis of their scores, which are either very high or very low. It happens that sometimes the group is likely to move closer to the average in the subsequent test. This is not likely to affect the group I am working with, as the group was chosen not based on test scores but on the basis that they are isiXhosa mother-tongue speakers and they have encountered isiXhosa at school.

3.1.1.6 Selection Bias

Selection bias is concerned with the fact that there may be differences, sometimes subtle ones in the way the group or groups are selected. Sometimes, it may happen that the group that is selected as the control or treatment group may show eagerness in the phenomenon that is to be measured. In such a case, the results may be confused to be a result of treatment. For instance, the administrator may select a group that seems more eager, for example to exercise than those who are not enthusiastic about exercising, sometimes for post-intervention, if one wants to evaluate or compare enthusiasm between two groups. This study however, does not utilize different groups and thus limits threats with regards to selection bias. Instead, one group is utilized pre- and post-intervention.

3.1.1.7 Experimental mortality

While many differences may occur, there may be a loss of subjects in the treatment group versus the subjects in the control group. For instance, if one considers the example of the group that is eager or enthusiastic to exercise, the treatment group may not complete the exercise for the intended duration and thus may yield results that may threaten validity. This may be true when one looks at the two different groups that are compared. However, this study in particular is a single group that takes part prior and post intervention. Even if there might be a loss of some subjects, if the amount is not too significant, the results can be reliable.

3.1.1.8 Selection-maturation interaction

This entails changes that may occur due to the interactive effect of selection bias where the maturation may be mistakenly believed to be due to the effect of experimental treatment. In other words, the researcher may mistakenly believe that the results obtained are due to the effect of the test, yet they may be due to interaction or due to maturation over time. Campbell and Stanley (1965) admit that some threats are unavoidable and the researcher may not be able to contain such threats. However, it does not mean that the research may not be conducted. This particular study has one of those threats that were unavoidable. This due to the fact that the time given to the researcher to interact with the subjects made it impossible to control the maturation. In other words, the subjects had an already scheduled time for their course, and the researcher could only work around those times. Furthermore, there was no way to control the subjects' interaction since they are bound to work or study close to each other. However, the interaction itself could have little effect on the results for my study.

3.1.2 Threats to external validity

According to Campbell and Stanley (1965: 5), “external validity asks the question of generalizability.” This means, it asks the question of what population, settings, treatment variable, group, etc. can the effect be generalized. Therefore, the threat to external validity refers

to the extent to which the results of a study can be generalized. Some of the threats for external validity are listed and discussed below:

3.1.2.1 Testing effect

This refers to how pre-testing interacts with the experimental treatment and prevents the effects that the results yield to not generalize to an untested population. In other words, the pre-test may provide clues for the treatment group in such a way that it may lead to interaction between pre-test and treatment, yielding unreliable results. This threat suggests that, should there be no pre-test, there would not be concerns to the validity. Since my study evaluates attitudes prior to intervention and post-intervention, there is no way to avoid such threats. However, this threat applies more when the researcher has both the control and treatment group. This is because the control group may give the untested group(s) to whom the results will be generalized clues as to how to respond to the questions. This particular study is therefore using one group, which ultimately minimizes the threats to validity.

3.1.2.2 Selection effect / Interaction effects of selection biases and the experimental treatment

The selection effect, or what is sometimes referred to as interaction effect of biases, and the experimental effect, entails an effect where some selection factor of control groups interact with the experimental treatment, which would not be the case if the groups were randomly selected. This means that, because groups may be selected and divided based on certain criteria, their interaction may cause threats to validity. In the case of this study, although the group is selected on a certain criterion, the fact that the subjects are not divided, limits such threats.

3.1.2.3 Experiment effect

Sometimes, when the subjects are participating or involved in a carefully designed and implemented study, it can be a very different experience compared to receiving the same treatment in an ordinary setting. In other words, the fact that participants know that they are involved in an experiment may cause them to react differently when compared to an ordinary setting which they are used to. Due to ethical reasons, it is difficult to control such a threat,

because disclosure is imperative when conducting a study which involves participants and thus makes the threat unavoidable, unless in some cases where the results rely solely in disguise of the experiment.

3.1.2.4 Multiple treatment effect

This threat occurs when the same subjects are exposed to a repetitive treatment where subjects are used as their own comparison group, for instance. Campbell and Stanley (1966: 6) argue that “effects of prior treatments are not usually erasable.” Such a treat is again limited due to the single treatment which this study employs, although it is the same group that is involved in pre-test and post-test evaluation.

It is important to note that some of the threats may not be applicable in some designs, as different experiments are designed for a particular study. For instance, some experiments make use of different groups, such as two control groups, that may be given one treatment and then be compared to two experimental groups, while in other cases, two experimental groups may be given repeated treatments and then compared to the two control groups. Essentially, there is no simple formula that can be used to address the threats to internal and external validity. This is because each research poses different challenges that necessitate well-thought and creative solutions. It is in light of this that we have to constantly reinvent these research methods every time we use them in order to accommodate the real world of research practice (Sandelowski, 2012).

3.2 Research Methods

Research designs are usually structured according to two approaches – the quantitative and qualitative approach. Sometimes, one approach may not account for different phenomena, which a researcher might be investigating, perhaps due to the complexity of the research itself. Sandelowski (2000: 246) argues that “the complexity of human phenomena mandates more complex research designs to capture them.” This is because in other cases, the researcher may want to follow up on certain scores that were obtained from evaluating a certain phenomenon in

order to find out more information as to why the participant obtained such a score. This may require the researcher to find out more about what makes a case typical, extreme, or intense. It is in such cases that some studies adopt both qualitative and quantitative approaches. This is known as the mixed methods approach. This particular study consisted of four datasets. It was therefore important to use different methods to collect and analyse data, i.e. questionnaires, focus group discussion, administration of a test, as well as development of terminology. In this study, a mixed method approach, which makes use of both qualitative and quantitative methods of analysis, was adopted. This mixed method approach was suitable for the study as it helped gain fuller insight into why some phenomena were responded to in a certain way, and also in analysing what might have changed or given rise to the change.

3.3 Research Population

White and Sabarwal (2014) contend that when using a quasi-experimental design, it is important to provide specific details about methods and data collection. This includes the details about participants with respect to their gender, age as well as background. The participants therefore were students of the University of the Western Cape who were enrolled in Nursing as a course. It is stipulated on the University website that the B-Nursing programme is a full time, structured programme with prescribed modules offered over four years. In addition, registered students are placed in clinical facilities, such as hospitals, for compulsory clinical learning, and students are expected to fulfil the clinical requirements set out in the programme as directed by the South African Nursing Council. It was therefore important to conduct this study in such an important department in order to evaluate whether there were linguistic challenges that could hinder the acquisition of knowledge in order to perform the required duties as specified above.

Eligibility criteria, i.e. the characteristics in the population, specify that the students need to be in their second year and need to identify with isiXhosa as their home language to be included in the study. The students vary in terms of their background as some were born in the Eastern Cape whose inhabitants are predominantly isiXhosa speakers, others were born in Cape Town, and a few were born in areas from other provinces. The participants recruited were a group of students in the Nursing department, specifically doing the module Human Biology (HUB 228),

which took place on a Thursday. Their ages ranged from 18–36. However, the age was not an important factor for the study as long as they had done isiXhosa either in primary or secondary level of education. The group consisted of 35 students. Of the 35 students, 23 were females and the other 12 were males. From initial inquiries, it was expected that a minimum of 50 participants could be recruited. However, about 35 students volunteered to take part in the study. Thus, 35 students were recruited for the study.

Having obtained permission from the Nursing department, I was given four weeks to meet with the group provided our meetings did not impede with their academic progress. This meant that I could only interact with them for 30 minutes in class. The group task was to fill in the questionnaires (pre- and post), study both English and isiXhosa learning material, and take part in the test questions. The first week was an introduction to the study. Thereafter, I handed them the consent forms, followed by the pre-test questionnaires. I read out instructions on filling in the forms as well as clarified the pre-test questionnaire.

3.4 The Questionnaires

Drawing on White and Sabarwal's (2014) suggestions on provision of details about the background of participants, questionnaires were used to provide details about participants' backgrounds. Questionnaires help elicit such information. Furthermore, since the study 1 evaluates attitudes questionnaires are one of the techniques that help evaluate attitudes towards a certain phenomenon (Baker, 1992). The questionnaires were administered as a dataset that utilised the quantitative method of research.

As mentioned above, the study made use of pre-test and post-test questionnaires. The pre-test questionnaires were administered prior to the intervention. The intervention will also be discussed below, but simply put, it pertains to the provision of lecture material to the respondents in order to evaluate whether it had an impact on the participants. Both the pre-test and post-test questionnaire were similar. The difference was that the pre-test was administered before the intervention, while the post-test questionnaire was administered after the intervention. The questionnaire (see Appendix I) comprised of two sections:

- the first section consisted of general background information, e.g. name/student number; course of study; year of study; length/level of study; competence or self-assessment in isiXhosa and English according to the four criteria, i.e. reading, writing, speaking and understanding; area(s) one grew up; whether participants did isiXhosa in primary school or secondary school,
- the second part consisted of statements measuring language attitudes, which was adapted from Baker (1992).

The questionnaire had statements that required Likert scale-type responses (strongly agree, agree, disagree): I like hearing isiXhosa spoken; there are more useful languages to learn than isiXhosa; I prefer to be taught in isiXhosa in varsity; etc. Such questions, according to Baker (1992), help to determine the attitudes of the participants. The Likert scale is a psychometric response scale primarily used in questionnaires to obtain a participant's preferences or degree of agreement with a statement or set of statements (Bertram, 2012). Likert scales are a non-comparative scaling technique and are unidimensional (only measure a single trait) in nature. Respondents for this study were asked to indicate their level of agreement or disagreement with a given statement by way of an ordinal scale. Variations: Most commonly seen as a 5-point scale ranging from "Strongly Disagree" on one end to "Strongly Agree" on the other, with "Neither Agree nor Disagree" in the middle; however, some scholars may choose the use of 7- and 9-point scales which add additional granularity. Sometimes a 4-point (or other even-numbered) scale is used to produce an ipsative measure (where respondents compare two or more desirable options and pick the one that is most preferred - forced choice) where no indifferent option is available. Each level on the scale is assigned a numeric value or coding, usually starting at one (1) and incremented by one for each level. For example:

Figure 3.1: showing Likert Scale responses

1	2	3	4	5
<input type="checkbox"/> Strongly Agree	<input type="checkbox"/> Agree	<input type="checkbox"/> Indifferent	<input type="checkbox"/> Disagree	<input type="checkbox"/> Strongly Disagree

Although the Likert scale may have its limitations, it has been used in many attitude studies. For instance, Bertram (2012) lists the following limitations which Likert scale may have:

- central tendency bias - sometimes participants may avoid extreme response categories like strongly agree or strongly disagree
- acquiescence bias - in this case participants tend to agree with statements as presented in order to “please” the experimenter
- social desirability bias - participants tend to portray themselves in a more socially favourable light rather than being honest
- lack of reproducibility
- validity may be difficult to demonstrate - are you measuring what you set out to measure?

However, it is on this basis of its advantages that this study used the Likert scale to prepare the responses. Some of those advantages by Dane Bertram are listed below.

- It is simple to construct
- likely to produce a highly reliable scale
- easy to read and complete for participants.

This will be explained further under the data analysis. Intervention is discussed below. Basically, administration of questionnaires was divided into two parts. The first part dealt with administration of the questionnaire before intervention. The second part dealt with the administration of questionnaires after the intervention. Although the questionnaires are in the form of text rather than numbers, the responses were numbered in order to enumerate the responses. In this sense, the questionnaires will be analysed through quantitative analysis.

3.5 The Intervention: How the learning materials were developed

The second dataset is the development of learning materials, which were derived from the HUB 228 module. The dataset involves the creation of the terms in the module and the practicalities of using theories discussed in chapter two (Section 2.3.2) in order to create such terms. This section links the research design to the research question which interrogates how disciplinary texts can be created in isiXhosa on the basis of terminology development. It would be an injustice to squeeze all the details of developing learning material in this section, therefore a section on the development of material will be discussed in the following chapter (chapter 4). This part is merely highlighting the tasks involved with regards to the participants and the procedures followed with regards to the development of terms as another dataset.

After permission was obtained from the Nursing faculty, I was then directed to the lecturer for Human Biology module known as HUB, the kind of module which I was hoping to base my study on. HUB is divided into modules that vary depending on the level of study. This module known as HUB 228 is the one I opted for. It is offered in second year during the second semester. It has a range of topics, ranging from the anatomy of the heart and the diseases associated with it, lungs, neurology, etc. I was provided with a range of topics to choose from by the HUB 228 lecturer in order to develop the learning materials in isiXhosa. The anatomy of the heart was advisably the easiest to understand compared to the other topics but interestingly, students still found difficulty in understanding it, according to the lecturer's input.

From there, the lecturer advised that I should conduct my study in the one class group that had more isiXhosa students than any other during the semester. The classes were fixed, which means no student from another group was allowed to join any other group once the classes commenced. We arranged that I was to see the students once a week during their tutorial period for the duration of four weeks. Any other task that I required them to perform would be in the respondent's own free time upon provision that they agreed. I was permitted to sit and observe in the class before tutorials. Basically, the class was two hours long, one hour for the lecture and another for the tutorial.

The lecturer and I looked at the first lecture. The first lecture dealt with pericardium, orientation of the heart, cardiac innervation, congenital defects, and coronary circulation. I found the terms to be somehow difficult, but these were the necessary challenge I needed to carry out the research. It was from the first lecture that the terms were extracted and created. Textbooks, as

well as lecture notes were the major study resources for the module. The textbook they use is *Fundamentals of Anatomy and Physiology, 8th Edition*. The lecture notes were provided through an upload on Ikamva, a site where all the relevant information in most departments around the university is disseminated. On this site, each student is required to log in using his/her own login details.

The students' lecturer designed the lecture notes, which were based on the anatomy of the heart. They consisted of 35 slides. I decided to acquire both the textbook and lecture notes on this topic in order to acquaint myself. It was after I had a long interaction with the lecturer that I understood what the topic was about. I focused both on the textbook and lecture notes, but paid more attention to the lecture notes, because they were easy to understand and many terms were also defined. From both the textbook and lecture notes, 92 terms were extracted. I had to find equivalence of these terms in isiXhosa. Due to the scarcity of the terms in isiXhosa, I had to develop terms in order to ensure a development of isiXhosa text in the HUB 228 module. After the terms were developed, they were used in a text that was also translated into isiXhosa. All the translations were taken to an accredited translator in the department of isiXhosa at UWC in order to be verified and rectified should there be any discrepancies. Indeed, some discrepancies discussed in chapter 4 were found. They were rectified and that led to the development of a DVD.

The DVD was produced as part of the isiXhosa learning materials. Its role was to curb any shortcomings that might arise in studying the material. In their paper, Antia and Dyers (2015) recorded that more students preferred to listen to podcasts rather than reading non-English text. The DVD therefore, was to ensure that even those who found difficulty in reading isiXhosa (even though they had done isiXhosa in primary or secondary school) could be afforded an opportunity to use the isiXhosa learning materials. The DVD was based on lecture one which the study focused on. It was basically a translation of the English material. After the video was produced, it was taken to the professional translator for verification. It was after the video was deemed good enough to be used as a resource that it was burnt to a DVD and was given to the participants.

3.6 Multiple choice class test

The third dataset is the multiple choice test which made use of quantitative data. These results were obtained by students participating in a task which involved studying a text on lecture one in their HUB 228 module in isiXhosa and answering a set of questions. In other words, the respondents were required to study the isiXhosa as well as the English materials. Thereafter, the participants received ten multiple-choice questions that they were required to answer as a test in class. The test was a way to evaluate whether or not the material enhanced any understanding of their module. The participants were required to answer questions on either the English or the Xhosa version. The results obtained constitute the second set of quantitative data. The students were given two weeks to look at the learning materials that were both in English and isiXhosa. This was done during the fourth week of engaging with the participants. The participants were also provided with lecture slides that were in both isiXhosa and English as well as the DVD. However, the DVD was mostly in isiXhosa. The introduction of the DVD was meant to assist those who may have had trouble reading isiXhosa although claiming to be proficient in the language.

In consultation with lecturer I was working with, we identified some questions in lecture one as to the best way to assess the participants, as it was the area where most of the terminologies used throughout the module were introduced. The questions were more or less similar to the ones asked during a class test or examination. Multiple choice questions were formulated because these types of questions are also used as a form of assessment in the module and were a lot easier to mark. The students had to simply indicate the correct answers. The memo was drafted by the lecturer and I translated it. The multiple-choice questions were then sent, along with the other translated material, to be verified for adequate translation.

There were 29 students who took part in the administration of the test. They were asked to volunteer to answer either the English or isiXhosa version. Out of the 29, 19 participants volunteered to answer the English version while 10 volunteered to answer the isiXhosa version. Although the students were asked to answer only one version, i.e. either English or isiXhosa, they were not prohibited from navigating between the two languages. The first set of questions in the question paper was in English and the second set was in isiXhosa. The test was treated as a regular class test where no noise or interaction with another participant was allowed. I was

walking around the group with the help of another tutor who was coordinating the tutorial in order to ensure that none of the participants were transgressing on the instructions given. It took the participants about 20 minutes to finish the test. The participants were given the second set of questionnaires to answer (post-test) on completion of the test. Due to time constraints, 24 participants finished filling in the questionnaires. Both the post-test questionnaires and tests were collected and were filed separately in different boxes, clearly marked before they were stored along with other datasets in order to be analysed.

3.7 Focus group discussion and procedure

Since a mixed method of approach was utilised, focus group discussions as a qualitative method was adopted as an approach, which is the fourth dataset. Qualitative method of analysis that is opted for in this study is the interpretative method of analysis (Terre Blanche, et al; 1999). This is basically the utility of focus group discussion with the respondents. Focus group is a type of in-depth interview accomplished in a group. In fact, Terre Blanche, et al (1999) argue that in the social sciences, the two main means of collecting qualitative data are the individual interview and the observation of participants in groups. Focus group combines elements of these two approaches by interviewing participants in groups. Firstly, focus group is different from an interview as it is conducted with a group of participants while the interview can be a one-on-one interaction with a participant. Secondly, while the in-group interview is done, observations are also conducted. This way, focus group combines both observations and interviews. This is advantageous because it means that a focus group discussion allows for a richness and a flexibility in the collection of data that are not usually achieved when applying an instrument individually, while at the same time permitting spontaneity of interaction among the participants.

Furthermore, using focus group as another technique is in line with the argument made by Baker (1992), where he posits that attitudes are hard to measure, recorded interviews, or discussions can therefore be conducted to narrow the gaps on information that could not be captured in the questionnaire. For instance, it is not easy to conclude why one may have chosen to have negative or positive attitudes towards a certain phenomenon. It is through in-depth interviews or follow-up discussions that one can get the chance to respond or give a much-detailed response towards such a choice.

The focus group discussion for this study consisted of open-ended questions. Open-ended questions were not necessarily aimed at an individual but rather at the whole group. With open-ended questions, participants are free to respond in their own words, and these responses tend to be more complex than simply “yes” or “no”. This allows for much more subjective responses that sometimes may be informed by ideologies, which each individual subscribes to. Freitas, Oliveira, Jenkins and Popjoy (1998: 3) recommend focus group discussion as:

“it is particularly suited to be used when the objective is to understand better how people consider an experience, idea, or event, because the discussion in the focus group meetings is effective in supplying information about what people think, or how they feel, or on the way they act.

In other words, when a participant answers these open-ended questions, they are not a simple yes or no but rather extensive responses that are dug deep in one’s belief.

Furthermore, Terre Blanche *et al.* (1999,) as also mentions that focus group discussions give the researcher the opportunity to get to know the people intimately so that one can really understand how they think and how they feel. Most importantly, particularly in my study, they are important because the questionnaires tend to restrict the participants from expressing themselves widely on their preferences to this object rather than the other. Sometimes a focus group discussion gives the researcher an opportunity to investigate why some participants followed a certain trend than others. Therefore, it is through follow-up focus group discussions that some questions, which could not be clearly articulated in the questionnaire, can be addressed.

Apart from being asked to fill in questionnaires, as additional data, the participants were asked to volunteer in a focus group discussion. The focus group discussion was important for the study because it was enabling the researcher to follow up on those questions that may not have been covered in the questions. Freitas, Oliveira, Jenkins and Popjoy (1998) advise that a focus group discussion should be utilized as it helps to supply interpretations of the participants’ results from initial studies, and for generating additional information for a study on a wider scale.

Two groups were involved in the discussion for this study. These groups consisted of those who answered the isiXhosa version of the test and those who answered the English version. The idea was to evaluate separately, or rather to find out, what informed the participants of the choices they made on both questionnaires and tests. Moreover, I was also interested to find out how the different groups perceived the isiXhosa learning materials, and whether or not it aided their understanding of the module. Their input was important for the study as it coincides with the aim of the study, which evaluates the attitudes of students towards the use of isiXhosa in HEIs. The first group consisted of six participants. The participants belonged to the group that answered the English version of the test. They were of legal age and thus did not require any consultation from the legal guardians for permission. They all consented to be recorded while the discussion was in progress and their views could be used in the study. The discussion took place in the study room in one of the residences of the University of the Western Cape. It took place three weeks after they had written the test. Prior to the discussion, I made sure that I had fully charged my Samsung J1 ACE cell phone, which was used for the recording. I also had a notepad to make notes when I needed to. Upon gathering information, the recording was transcribed and stored along with other documents used for the study.

In the second group discussion, five participants were present. Four of them answered the isiXhosa version. They also were of legal age and thus did not require any consultation from the legal guardians for permission. They also consented to be recorded while the discussion was in progress and their views could be used in the study. The discussion took place in one of the empty classes at the University of the Western Cape. I went in the class with my fully charged Samsung J1 ACE that was used for recording and a notepad in order to make notes when I needed to. The recording was transcribed and the transcription was stored along with other documents used in the study.

3.8 The analysis of the datasets

This section deals with the data analysis. It answers the question of how the data was analysed. Since the study made use of qualitative and quantitative analyses, the datasets are discussed based on this mixed method of analysis. Each dataset was analysed adopting its own method.

3.8.1 Pre- and post-intervention questionnaires analysis

The first dataset to be analysed was the questionnaires. For these I made use of a quantitative method of analysis. Quantitative method attempts to explain phenomena by collecting numerical data that are analysed using a mathematically based approach. This means that when one wants to find out or explain a certain phenomenon through statistics, this approach may be adopted. However, we need to be aware that there are many phenomena a researcher may want to look at, but which do not seem to produce any quantitative data. A clear example would be when a researcher wants to find out how many students have negative attitudes towards, let us say, English. In this example, the data does not naturally appear in quantitative form but can be analysed in a quantitative approach. This can be done by designing research instruments aimed specifically at converting phenomena that do not naturally exist in quantitative form into quantitative data. In this study, there are two datasets that utilize quantitative analysis. The first dataset was the pre-test and post-test questionnaires on attitudes. The data in the questionnaire itself does not exist in a quantitative form but was converted into quantitative data. In order to ensure conversion of the questionnaires into quantitative choices, the study made use of a Likert scale-type of responses, as discussed before.

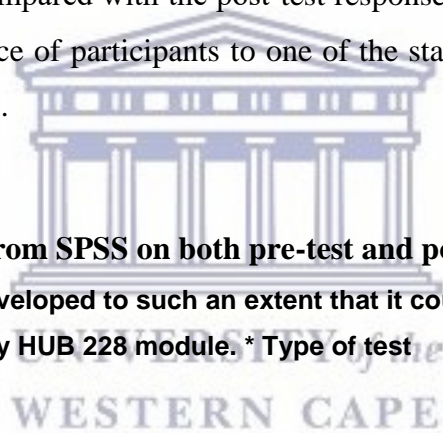
While many studies make use of analytical tools to analyse questionnaire data, for experimental design, I used a programme known as Statistical Package for Social Sciences (SPSS) as an analytical tool. SPSS is quite a complex tool as it has different dynamics that allow for different analyses. The advantage of using this program, as Bryman and Cramer (2005) put it, is that it enables a researcher to score and analyse data very quickly and in many different ways. They warn, however, that one needs to know how the program works otherwise one will waste hours and also make many mistakes while using such a program. Therefore, they advise that the researcher should rather allow trained personnel, preferably a statistician, to make use of the program.

In order to analyse data, particularly questionnaires, the program makes use of digits. This means that if the data is in text format, it needs to be converted into digits before it can be analysed. Since the questionnaire in my study was in the form of text, the questions or statements were converted into numbers. This is known as coding. For instance, although the question or

statement one may be in the text format, it can be referred to as one (1). The possible responses which may appear under ticked boxes may be converted as a single digit from one to nine, depending on the number of possible answers. In other cases, one finds Likert scale-like responses from ‘Strongly agree’ to ‘Strongly disagree’, depending on the number of possible answers. The coding may refer to the first possible answer as one and the last possible answer as five (5).

This study was more concerned with the number of respondents who chose a particular response to the statement instead of another. This means I was mostly looking at the attitude part of the questionnaire and what particular statements were preferred by some participants compared to others. This was done through percentage value. In other words, I was looking more at the percentage of participants who agreed or disagreed with a particular statement. The participants’ responses were compared with the post-test responses on the same question. Below is a table showing the preference of participants to one of the statements found in both the pre-test and post-test questionnaires.

Table 3.2: Sample of results from SPSS on both pre-test and post-test questionnaires I even doubt that isiXhosa could be developed to such an extent that it could be used for teaching and providing lecture materials in my HUB 228 module. * Type of test



Crosstab

			Type of test		Total
			Pre test	Post test	
I even doubt that isiXhosa could be developed to such an extent that it could be used for teaching and providing lecture materials in my HUB 228 module.	Strongly Disagree	Count	9	1	10
		% of Total	15.3%	1.7%	16.9%
	Disagree	Count	15	5	20
		% of Total	25.4%	8.5%	33.9%
	Indifferent	Count	5	4	9
		% of Total	8.5%	6.8%	15.3%

Agree	Count	5	7	12
	% of Total	8.5%	11.9%	20.3%
Strongly Agree	Count	1	7	8
	% of Total	1.7%	11.9%	13.6%
Total	Count	35	24	59
	% of Total	59.3%	40.7%	100.0%

Table 1 above shows the SPSS format followed in analysing the results of one of the statements from the questionnaire. This followed the Likert scale-type of responses. The first two rows on the results (Count and % Total) represent the number of participants (Count) who strongly agree with the statement as well as the percentage of the participants (% Total) on both pre- and post-test. This is followed by the number of participants who responded with 'agree'. The next two rows following that are representations of the participants who were indifferent. Following that are the two rows which show the number and percentage of participants who disagreed with the statement. The participants who strongly disagreed with the statements in terms of number and percentage follow this. The final two rows indicate the total number of participants and their percentages who responded to both pre-test and post-test questionnaires. Essentially, the questionnaires were analysed as follows.

3.8.2 Analysis of performance in the tests

Another dataset that required quantitative analysis was the test based on the HUB 228 test that was given to the participants. The participants were given 10 questions which they answered in 20 minutes. The answer sheets were collected and were marked using a marking guide obtained from the HUB 228 lecturer. The marking was done by the researcher and the fourth-year nursing student who assisted with coordinating the participants as well as the development of learning materials. The sheets were sent to the HUB lecturer, to verify whether the marking was satisfactory. The marks on each question were captured on a Microsoft Excel spreadsheet. Each participant's mark on each question was captured on the data sheet. Two groups answered the

test, those who answered the English version, and the isiXhosa version. The groups were put on separate worksheets. The marks were calculated using Microsoft Excel formulas. For instance, the total number of students who answered question 1 is calculated as 'sum'. These marks were compared on each question, i.e. between the group that answered the English version and the group that answered the isiXhosa version. The results are discussed in chapter 5.

3.8.2 Analysis of developed material

The development of learning material as another dataset was analysed on the basis of the theories discussed in chapter two (section 2.3) and against the practicability in real context. In other words, the analysis interrogates whether or not the theories offered enough basis for development of such terminology through the development of materials. This included the composition of DVDs. The DVDs consisted of the lecture one presentation that was produced as a video presentation of the above-mentioned lecture slides. The students were required to watch the DVD, read their isiXhosa lecture slides and then compare those with the English version of their slides to ensure better understanding of the whole lecture. Therefore, based on the theories and strategies by Sager (1990), Antia (2000) *et al.*, as discussed in chapter 2 (section 2.3.4), the terms developed were analysed.



3.8.3 Focus group data on both interventions

Focus group discussions were analysed using thematic analysis. A thematic analysis method is one of the methods used in qualitative data research analysis. Thematic analysis is a method for identifying, analysing, and reporting patterns (themes) within data. It minimally organises and describes datasets in (rich) detail. In some cases, it often goes further than this, and interprets various aspects of the research topic (Boyatzis, 1998). Thematic analysis is important in this study, as it provides a flexible and useful research tool, which can potentially provide a rich and detailed, yet complex account of data. This rich data can be achieved by encoding qualitative information. This requires explicit code, i.e. list of themes, a complex model with themes, indicators and so forth. The coding process involved recognizing (seeing) an important moment and encoding it (seeing it as something) prior to a process of interpretation (Boyatzis, 1998). A

“good code” is one that captures the qualitative richness of the phenomenon (Boyatzis, 1998: 1). Encoding the information organizes the data to identify and develop themes from them.

A theme is a pattern found in the information that at minimum describes and organises the possible observations, and at maximum interprets aspects of the phenomenon. In other words, a theme captures important information about the data in relation to research, and that important information can be organised into patterns and interpreted. Furthermore, a theme allows for data that the researcher deems important to be captured and used for arguments. There is no limit to the number of themes that can be used. In some data, items one might have 50 per cent of data codified into themes or have relatively little data items as themes. So ideally, although the researcher might want to use more data to elicit information relative to the research, more items in the data does not mean the theme is crucial. In other words, it does not validate the reliability of the data itself.

In this study, the focus group discussion is organised according to themes. Even though there may be countless number of data fitting into a single theme, only the data that best depicts the argument of the theme is employed. Braun and Clarke (1998) suggest six steps to follow in developing themes. Although these steps are not discussed in detail, they have been followed in developing themes in order to analyse focus group discussions. These are:

- Familiarising yourself with your data
- Generating initial codes
- Searching for themes
- Reviewing themes
- Defining and naming themes
- Producing the report

Themes can be generated inductively or deductively. Generating theme inductively means that the themes are generated from raw data, i.e. from interviews or focus group discussions. Generating themes deductively refers to themes based on theories. This study made use of inductive thematic analysis. In other words, the themes were generated from the raw data.

3.9 Ethical considerations

Strict research ethics were adhered to in this study. This meant that I first had to get ethical approval from the university. Once I received the ethical clearance, I then received permission from the Department of Nursing to conduct my study. Thereafter, I explained to each participant what my research was all about and I stated clearly that their participation was voluntary. Since the focus group interview was audio-recorded, I assured the research participants of the confidentiality of their responses and that the recorded information would be used purely for academic purposes and nothing else. The collected data was stored in a secure office, and when the study was completed the data could be destroyed after five years. In addition, I informed the research participants that no name or identity of any individual would be revealed in the study but that a system of coding would be used. Furthermore, the respondents were given full information on the details of the study. They then signed a letter of informed consent (see Appendix ii). I also clarified any matter, which the research participants raised before signing. After explaining all these details to the research participants, I asked for their permission to proceed with the study. In other words, their informed consent was sought and no research participant was persuaded or forced to take part in the study, and they had the right to withdraw from the study at any time should they wish to do so. Finally, I made sure that I protected my respondents' dignity and did not discriminate based on sex, age, race, religion, status, education background, or physical abilities.

3.10 Limitations of the Study

A number of factors limited the scope of my study, which must be acknowledged here. Firstly, the size of the group was too small to produce statistically significant data, but that could unfortunately not be avoided given the size of the group of students to whom I was allowed to have access. Secondly, there were a number of time constraints as well which impeded data collection through the questionnaire and focus group discussion – I had to fit in my study with the very rigorous programme these students follow. It would also have been desirable to develop the materials in consultation with the students, instead of preparing the material on my own with the assistance of one fourth year Nursing student.

3.11 Conclusion

This chapter has dealt with the methodology followed for this study – a blend of quantitative and qualitative methods. It has taken account of the ethical considerations as well as the limitations of the study.



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CHAPTER FOUR

DEVELOPMENT OF LEARNING MATERIALS

4.0 Introduction

As discussed in the previous chapters, one of the reasons for negative attitudes towards the use of African languages is the lack of terminology in these languages. The discussions further suggested the possibility that the development of terminology in African languages can change negative attitudes towards these languages (see also Heugh, 2009). While chapter 2 discussed the theory of terminology, this chapter will discuss and analyse the process of the development of terminology. Whether or not the terminology developed may have any impact, it will be discussed in the next chapter. For now, this chapter provides a discussion on how the theory of production of material was applied and the analysis on the actual use thereof. This chapter will further report on the development of a DVD and analyse the actual use of the terms in the presentation of the HUB 228 lecture. This discussion links this chapter to some of the objectives of the research. In particular, it links to the objective, which is to investigate the feasibility of using isiXhosa as a resource for academic development and as a medium of instruction.

4.1 The Intervention: How the learning materials were developed

This section deals with the development of learning materials which were harvested from the HUB 228 module. This section starts by looking at the initial stages that led to the harvesting of text. Furthermore, it will look at the creation of the terms in the module and the practicalities in applying the theories discussed in chapter 2. Finally, it will analyse the developed terms, how they are used in the text and the challenges encountered while used in the text.

4.1.1 Preliminary stages

Students who attend the Hub 228 module make use of textbooks as well as lecture notes. These were used as the source text for the translation. The textbook they use is the *Fundamentals of Anatomy and Physiology, 8th Edition*. The lecture notes were provided through an upload on Ikamva, a site where all the relevant information in most departments around the university is disseminated. On this site, each student is required to log in using his/her own login details. The lecture notes, of which on the topic was the anatomy of the heart, were designed by the students' lecturer and consisted of 35 slides. I decided to acquire both the textbook and lecture notes in order to acquaint myself with the topic (anatomy of the heart). It was after I had a long interaction with the lecturer that I understood what the topic was about. I focused both on the textbook and lecture notes but paid more attention to the lecture notes because they were easier to understand and many terms were also defined.

4.1.2 Harvesting of terms

In order to ensure a non-biased input, I had to work with the lecturer as well as a fourth year nursing student who helped me identify those terms. This was to ensure that the isolation of terms was not just based on my understanding of the terms or lack thereof but also on the expertise from the lecturer and the challenges the fourth year student may have experienced while doing the same module during his second year level. From the source text, the terms were then underlined and taken aside for thorough analysis or for developmental purposes in the target language. A total of ninety terms were harvested from both the textbook and lecture notes. These terms were not only scientific, but also English terms that were not regularly used during interpersonal communication, e.g. a term like '*effusion*'. Although '*effusion*' may be regarded as a general language term, it has its use widely in specific fields like that of science.

It is well known that scientific studies make use of scientific terms that are not necessarily understood by those who are not involved in that particular field, even if they can claim to be proficient in that particular language. In fact, some of the scientific terms are derived from other languages or are named after the person who discovered that entity. Sager (1990: 33) also points

out that "English relies heavily on borrowing elements from Greek and Latin which are variously anglicised." Sager continues to say that with such a long tradition of borrowing from those languages, including French, it is not clear whether the word has come into English via French or whether it is taken directly from one of the classical languages. Similarly, the study materials in the HUB 228 module consisted of many scientific terms. In this module, it is also not clear whether some of these terms were derived from Latin, Greek or French. The online dictionary as well as the Merriam-Webster dictionary were the available data sources that also proved to be effective enough to provide the etymology of the harvested terms. The term 'pericardium', for instance, is an example of a term which, according to the Merriam-Webster dictionary, is believed to be a Middle English term from Medieval Latin '*perikardios*', taken from the Greek term '*perikardion*'. Table 4.1 illustrates a short list of terms categorised according to their origin; the rest of the list is found in Appendix II.

TABLE 4. 1: SHOWING ETYMOLOGY OF THE TERMS

Term	Latin origin	Greek origin	French origin	English origin
Heart				English
Mediastinum	Latin			
Anterior mediastinum	Latin			
Superior mediastinum	Latin			
Posterior mediastinum	Latin			
Inferior mediastinum	Latin			
Thorax		Greek		
Thoracic cavity		Greek		
Pleural cavity		Greek		

Furthermore, the terms harvested included single terms (35) as well as compound terms. Compound terms consisted of two or more units. Fifty compound terms were identified. Of the

fifty terms, forty-two had about two units, eight had three units. The table below illustrates terms with a variety of units:

TABLE 4. 2: SHOWING THE NUMBER OF UNITS ON EACH TERM

Single unit	Two units	Three units
Heart		
Mediastinum	Anterior mediastinum	Manutrium of sternum
Thorax	Superior mediastinum	Body of sternum
Esophagus	Posterior mediastinum	Arc of aorta
Trachea	Inferior mediastinum	Autonomic nervous system
Thymus	Thoracic cavity	Sympathetic nervous system
Vagus	Pleural cavity	Parasympathetic nervous system
phrenic	Sternal angle	Ventricular septal defects
Diaphragm	Xyphoid process	Patent ductus arteriosus
Sternum	Midsternal line	
Pericardium	Intercostal space	
Pericarditis	Pericardial effusion	
Pneumopericardium	Cardiac tamponade	
myocardium	Myocardial infarction	
Stethoscope	Fibrous Pericardium	
Electrode	Serous pericardium	
Electrocardiogram	Parietal layer	
Vein	Visceral layer	
Artery	Pericardial cavity	
Aorta	Pericardial fluid	
Capillaries	Cardiopulmonary resuscitation	
Atherosclerosis	Circulatory system -	
Clot	Right Ventricle	
Thrombus	Left ventricle	
Embolus	left Atrium	
Spasm	Right Atrium	
Plaque	Coronary sulcus	
Lipoprotein	Coronary sinus	
Catecholamine	Pulmonary trunk	
Nociceptors	Coronary arteries	
Plexus	Venae cava	
Ganglion	Angina pectoris	
Synapse	Anaerobic metabolism	
Vasoconstriction	Interventricular	
Septum	Cardiac nerve	
Valves	cardiac innervation	
Stenosis	Sinoatrial node	

	Vagus nerves	
	Preganglionic	
	Post ganglion	
	Ciliary ganglion	
	Atrioventricular node	
	Septal defects	

Prior to finding the equivalents of the collected terms in the target language, it was important to obtain definitions. These definitions were obtained from the aforementioned sources, such as the two online dictionaries, Merriam-Webster dictionary and The Free dictionary; the HUB 228 lecture notes; the Anatomy and physiology, (2009) textbook, as well as the Texas Heart Institute glossary site. The table below is an illustration of some of the definitions obtained:

TABLE 4. 3: SHOWING DEFINITIONS OF THE TERMS

English term	Definition	Source
Heart	the organ in your chest that pumps blood through your veins and arteries	http://www.merriam-webster.com/dictionary/heart
Mediastinum	The region in mammals between the pleural sacs, containing the heart and all of the thoracic viscera except the lungs.	http://www.thefreedictionary.com/mediastinum

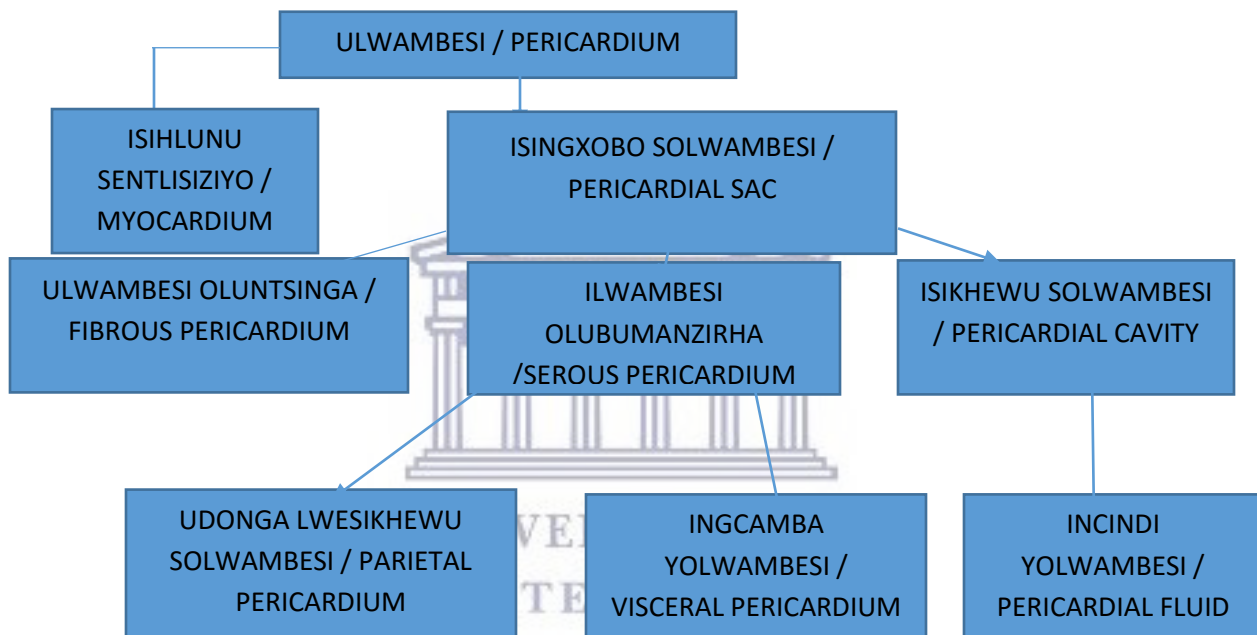
The rest of the list of terms is attached as appendix I in this thesis.

4.1.3 Modelling of terms

When terms are defined, it is easier to see the relationship between them. In fact, more often than not, the relationship between them is not visible in resources such as dictionaries because in such resources, the terms are arranged in alphabetical order. Sager (1990: 30) suggests that the best way is to model terms according to their relationships which he terms ‘generic relationships’. He argues that the generic relationship establishes hierarchical order, i.e. it

identifies concepts as belonging to the same category in which there is a broader (generic) concept which is said to be subordinate to the narrower (specific) subordinate concept or concepts. In other words, the generic relationship means that there is a relationship between a superordinate and subordinate concept where they are grouped in a hierarchical structure. In the development of isiXhosa material for the study, terms were grouped together according to their generic relationships, as seen below in figure 3.2.

FIGURE 4. 1: CLASSIFICATION OF PERICARDIUM COMPONENTS



The example above shows the superordinate term being the ‘pericardium’. There is a generic relationship between the pericardium and the other terms such as, for instance, ‘*fibrous pericardium*’ as well as the ‘*Serous Pericardium*’. This means that components that are found within the pericardium can easily be put together under the pericardium. Sager (1990) contends that the generic relationship entails both the vertical and horizontal relationship and can have several layers which can be represented by a tree structure as seen above. However, he warns that declaring a generic relationship may not be a sufficient criterion for identifying subordinate concepts in a particular set. This is because while the concepts may belong to a particular class, we should not attribute them to the same generic class of concepts because of their functions. However, Sager (1990: 35) also confirms that “it is possible to combine generic relationships

with an indication of the nature of the type of subdivision employed.” This way, all types can be distinguished by mode of operation, which in this case may be how they function. If ever there is a distinction in the HUB module, that distinction may be best made when one looks deeper into the HUB module, looking at each concept separately. For now, since lecture 1 of this module, HUB 228, is still an introduction to the study of the ‘heart’, the generic relationship is grouped by mode of operation. Therefore, it may be necessary to group them together, until such time a study that will allow for an in-depth analysis of the anatomy of the heart and its concepts is conducted. For the purpose of the study, the classification of terms was done to provide a broad outline structure for terminology collection.

4.1.4 Identification and proposing of terms

Antia (2000:33) contends that “most of the projects reviewed have a development perspective, a point that is obvious from the language(s) of: the source data; sources of terms, particularly loans; and of terms considered as working models.” By development, Antia means a compilation of terms from the source language which is to be developed for the target audience that is not familiar with the new terms. This requires a range of data sources that provide equivalents to the source data or a development of new terms. Similarly, in the study, the data sources, such as Nursing Dictionaries, specialised English dictionaries of Biology, English and isiXhosa, as well as internet sources that presented alternative translated terms or definitions of concepts, as can be found on the DAC terminology website, were exploited. As mentioned before, African languages do not possess the necessary terminology that can be used particularly in the science field, therefore, some terms had to be created. This required the identification of problem terms. By problem terms, I am referring to terms and concepts of a particular field that are deemed incomprehensible to the reader whose first language is the target language (isiXhosa in this case).

From a total of ninety terms, about nineteen of those terms had readily known equivalent terms in isiXhosa. Table 4 below shows the list of terms that already had the equivalents in isiXhosa:

TABLE 4. 4: TERMS THAT HAD EXISTING EQUIVALENCE IN ISIXHOSA

English	IsiXhosa
Esophagus	Uqhoqhoqho
Trachea	Umbiza
System	Isixokelelwano
Cavity	Isikhewu
Defects	Umonakalo
Space	Isithuba
Effusion	Ukuphuphumala
Layer	Ingcamba
Vein	Unobuyisa
Artery	Unothumbela
Aorta	Umxhelo
Fluid	Incindi
Capillaries	Imibhojana yentliziyo
Clot	Ihlwili
Ventricle	Ilolo
Spasm	Inkantsi
Atrium	Igumbi
Trunk	Umboko kanothumbela
Valves	Isivalo
Nerves	Imithambo-luvo

Table 4.4 shows the list of terms that were readily known in isiXhosa and those already found in the isiXhosa dictionary. However, nine of those terms were derived from compound terms. This means they were used with other terms that were deemed scientific, or used in the biology field, e.g. *pericardial fluid* or *pleuralcavity*. In total, there were nineteen terms from the remaining ninety-nine that could be found in the isiXhosa-English dictionary as well as in the DAC terminology website. The remainder of the terms could not be found in the isiXhosa-English dictionary and thus had to be developed following the theories discussed in chapter two.

4.2 Using theories as basis for term creation

Sager's (1990) approaches to the development of terminology, which have been dealt with in the previous chapter, were adopted. These are the use of existing resources, the modification of existing resources, and the creation of new linguistic entities.

4.2.1 Using existing resources

The first of those approaches used was the use of the existing resources. This approach, according to Sager (1990), is most common in English language. Fundamentally, it is where new terms are coined through analogy where the existing designation and meaning is transferred by such rhetorical figures as metaphor. In many cases, the simile tends to be the common way of new term designation. For instance, naming a concept that resembles that entity because of the similarities is something that the English also adopted in naming the concept. This is seen in the term '*sternal angle*' (a part in the sternum). Since the part referred to as 'angle' resembles an angle, it therefore was given that term. Using the same example in isiXhosa, the same strategy was utilized. However, a direct translation was first adopted. The term, '*sternal angle*' was initially called *imbombo yethambo lesifuba/lencum* (which can be literally translated as a corner of the chest bone). The readily available isiXhosa term for 'angle' is '*imbombo*', hence the adoption, '*imbombo yethambo lesifuba/lencum*'. It was after analysis that the term was later revised (see under the heading, challenges and analysis of terms). Below however, is the list of terms that posed similar challenges:

4.2.2 The modification of the existing resources

This method of modification of the existing resources, according to Sager (1990), is another strategy used in designation of terms. It includes the aforementioned techniques like derivation, compounding, conversion and compression, as mentioned in chapter 2 (section 2.3.3.3). The composition of terms for this study has largely adopted compounding and determination, and compression. However, some English terms have already adopted these techniques. The creation of these terms in isiXhosa was merely a translation of most of those terms. Although that may be the case, the manner in which the terms were created required bringing the existing words

together to create a new meaning. These strategies that guide the bringing together the existing words are discussed below.

a) Compression

The first strategy is compression (Sager, 1990). This entails the abbreviation of longer terms. Sometimes, when long terms are frequently used, they tend to be fashionably shortened or abbreviated or acronymized due to, for example, the flexibility of the abbreviated sound or maybe because it takes long to pronounce the whole word. Whatever the case, this strategy is often used in many aspects of life or any field. Essentially, the names of institutions, technical processes or other noun entities tend to be shortened, particularly, using the first letters of longer words. This is particularly true when it comes to English terms as the terms may be deemed to be too long. For instance, the word [ska:zi:] pronounced as ‘SKUH-zee’ is often used to refer to SCSI (Small Computer System Interface). Similarly, in the creation of terms for the study, the compression technique was already adopted for certain long words from the source text, like *Atrioventricular node* (SV node) as well as *Sinoatrialnode* (*SA node*). However, the designation of terms in the target language proved to be challenging. This is because the terms were going to be too long and thus would create more challenges when it came to their use in the text. This led to the adoption of the compressed terms as term designation. One could argue that it is basically the use of loan words, however, in this case the loaning happens from the compressed terms instead of the ‘original’ term. Thus, the phonological production as means of term designation had to be adopted. This required an adjustment in orthography of the target language. For instance, the SA [‘ɛsɛɪ] node [nəʊd], was termed *i-eseyi nowudi* while AV [‘ɛɪvi] node [nəʊd], was termed ‘*i-eyvi nowudi*’.

b) Determination

Sager (1990: 73) contends that “functionally, derivation and compounding serve the purpose of closer determination of the concept – narrowing its intension – while at the same time showing the relationship that exists between the new concept and its origin.” Essentially, what Sager means is that, the best way of creating a concept is to look at its function, thereby coming up with a term that shows the relationship between the new term and its origin. The creation of such term sometimes can be derived from the definition or the functionality of the entity. In the

case of the terms created for this study, it required bringing the existing terms together to create a new meaning. This was mostly done through compounding as a result of looking at the object and relating it to its particular function. The technique of determination as a word formation in most cases originates in syntagmatic determination. This means that we cannot use the whole sentence as a term but can use the function of the object or its definition to create terms. Consequently, that may result in the compounding of terms. For Ndlhovu (2014) however, this type of creation of terms is referred to as paraphrasing. This is because, in African languages, when there is an absence of a single term, the definition tends to be paraphrased and the key words that are salient from the definition are translated, adopted and sometimes compounded to form a new term. A clear example is from the term ‘*septal defect*’. This is not the term present in isiXhosa, however as defined in the MedicineNet, ‘*septal defect*’ is seen as “a defect in the wall separating the left and right sides of the heart.” In isiXhosa, the definition would be translated as *umonakalo okwidonga elahlula icala lasekunene nelasekhohlo kwintliziyo*. Consequently, the term that was coined originated from the definition and thus required compounding. This ultimately meant that the terms created was ‘*umonakalo wesahluli-macala entliziyo*’. Below is a short list of terms that have undergone the same process which resulted in their designation; the rest of the terms are found in appendix VI.

TABLE 4. 5: SHOWING DEVELOPED TERMS

ST	TT
Manutrium of sternum	Umqheba wethambo
Coronary sinus	Isitishi semithambo yentliziyo
Angina pectoris	Iintlungu zesifuba
Coronary sulcus	Isitishi semithambo yentliziyo
Pericardial effusion	Ukuphuphumala kolwambesi/kwenguba
Parasympathetic nervous system	Isixokelelwano semithambo-luvo okuzolisa
Sympathetic nervous system	Isixokelelwano semithambo-luvo entshukumo
Body of sternum	Isiqu sethambo lesifuba
Autonomic nervous system	Isixokelelwano semithambo-luvo ezenzekelayo

4.2.3 Using the new resources

While creation of terms can be a daunting task, sometimes when words are not easily created or lack alternatives, a basic strategy such as borrowing or loaning can be adopted. This strategy is frequently used where the term borrowed is re-adjusted accordingly to suit the language from which it is borrowed. Sometimes the adjustment is morphological or phonological. This borrowing is adopting words often from fully elaborated languages into a language less developed. It so happened that for my study, isiXhosa terms were not available. It was therefore important to borrow from other languages such as English.

4.2.3.1 Borrowing from English terms

Borrowing is a strategy that is widely used in term creation. This is mostly found in English. Even when creating terms in African languages, borrowing seems to come from English terms rather than from other languages, such as an African language (Ndhlovu, 2014). In my study, borrowing from other African languages is adopted.

For the benefit of my study, in order to create terms, I adopted indigenised loan words. This is because indigenisation of terms involves “changing the structure, spelling and pronunciation of these terms to suit the target language; the meaning and sound, however, remain the same” (Ndlhovu, 2014: 331). The table below shows the list of terms from source language to target language:

TABLE 4. 6: INDIGENISATION OF LOAN WORDS

<u>Source language</u>	<u>Target language</u>
Thymus	Ithayimasi
Vagus	Ivagasi
Phrenic	Ifreniki
Atherosclerosis	I-atherosklerosisi
Lipoprotein	Iliphoprothini
Catecholamine	Ikhatheholamini
Stenosis	Istenosisi

Ganglion	Igangliyoni
Xyphoid process	Izayifoydi proses

Table 4.6 shows a list of terms that have been borrowed from English (source text) and were used as isiXhosa terms (target text). It is observable in Table 4.6 that, according to the structure, spelling and pronunciation, the terms have been changed to suit the target language. Basically, the terms have been organized to suit the target language rules. The meaning and sound, however, remain the same. Another point that needs to be mentioned is that while isiXhosa uses the CV CV structure in its words as a rule, for its nouns the stem is always preceded by a prefix which is a vowel. Furthermore, when this strategy is adopted, because of the CV CV structure in Nguni languages (isiXhosa in this case), consonant sounds are usually followed by a vowel. For instance, ‘stenosis’ is the source language term but while the term is borrowed, it slightly changes in the target language to ‘*isitenosisi*’ as it is also the case in other terms on the list.

4.2.3.2 Borrowing from other African languages

While borrowing from the English language has become a norm, it is not often seen among African languages, where the borrowing happens from one African language to another. However, sometimes it happens that while languages are believed to be equal, their development may differ. This was seen after I have looked for equivalents of English terms from the isiXhosa dictionary but could not find any, other than the borrowed term. I first looked at other available dictionaries that were not essentially the isiXhosa dictionaries. These included isiZulu, isiNdebele and SiSwati. These languages are the sister-languages of isiXhosa as they are part of the Nguni language family. It was therefore important to see whether there was a term already developed or available in one of the languages other than isiXhosa. There were terms that were indeed readily available in isiZulu. Some of the terms included the term ‘*cell*’ which in the isiZulu dictionary is known as ‘*ingqamuzana*’. While the term ‘*cell*’ is already available on the DAC terminology website as ‘*iseli*’, another term borrowed from English, isiZulu had an already available term, which I found useful therefore I adopted the term as a synonym for the study. Just like the terms borrowed from English discussed above, Nguni languages also have the prefix in the term (noun) which in this case of ‘*cell*’ is ‘*i*’ in isiXhosa and isiZulu. IsiZulu and

isiXhosa are known as mutually intelligible, therefore, they share similar lexis. While they have differences on the basis of terming an object, most objects have similar terms. For instance, in isiZulu we have the word ‘*umuntu*’ which in isiXhosa is ‘*umntu*’. In some cases they may share the same term for a particular object, but they may differ in morphology. The example provided is typical of such a scenario. In the example provided, the term is said to have a lost vowel that is part of the base of the word and as an infix. When doing an analysis, according to Satyo (1996), the vowel ‘u’ from ‘*um(u)ntu*’ is usually lost or not visible in isiXhosa. The adoption of lost vowel as a strategy was applied in the term ‘*ingqamuzana*’ found in isiZulu where the letter ‘u’ was omitted to adapt to isiXhosa, hence the term ‘*ingqamzana*’ was adopted. Another example of the term that has been adopted from isiZulu is ‘*ulwambesi*’. Let us look at these terms below in Table 4.7:

TABLE 4. 7: SHOWING BORROWING FROM OTHER AFRICAN LANGUAGES

English	isiZulu	Lost vowel adoption	Final term
Person	Umuntu	Um(<i>u</i>)ntu	Umntu
Cell	Ingqamzana	Ingqam(<i>u</i>)zana	Ingqamzana
Pericardium	Ulwambesi	Ulwambesi	Ulwambesi

Table 4.7 above shows the similarities and the adoption of the terms from isiZulu. However, it is important to note is that the term ‘*umuntu*’ is not listed here to suggest that ‘*umntu*’ was derived from the isiZulu term ‘*umuntu*’. That alone would require extensive research. The inclusion of ‘*umuntu/umntu*’ is merely an example to illustrate how the terms were adjusted. Nevertheless, what is of paramount importance is that the difference between the two terms (*ingqamzana/ingqamuzana* and *ulwambesi*) is that there were no visible technicalities that would have required orthographic changes. Therefore, the term ‘*ulwambesi*’ remained as it is even in isiXhosa.

4.3 Challenges and analysis of terms

Developing terms that do not exist in the target language can be an extremely unnerving mission. This is because the source language and target language have very uneven knowledge structures. Furthermore, coming up with a concept for TL is not simply a matter of replacing a term with whatever term that comes into mind. One needs to consider that the language for specific purpose requires one to identify what features of concept x from SL are to be used in creating a term for the concept. This is particularly overwhelming if the TL has not been developed for that specific field. As it is the case in my study, some terms which were initially created were not fitting to the text from which they were extracted. In some cases, they were not providing comprehension of the subject of which the main idea was to simplify the ST and provide comprehension in the TT. This section therefore seeks to provide the challenges in developing terms, and an analysis of the target language version (term creation and use in the text).



4.3.1 Initial verification of terms

After all the terms were developed, they were presented to the fourth year student first to ensure that they were clearly referring to the part of the heart to which the English terms referred. It was discovered that some terms were not conducive to knowledge production. In fact, the fourth year student deemed the newly developed terms more confusing. This led to a consultation with the HUB lecturer in order to verify whether the terms were clearly depicting the same meaning the original term (in English) was referring to. Paxton (2013) also warns that when coming up with the term, we need to ensure that students do not grapple with conceptual meaning. In her argument she voiced that, “Simply providing the African word for the same term may not give students access to the way the term is used in the specialized domain of economics” (Paxton, 2013: 352). The challenge however, was the fact that there was no lecturer in the department who was an isiXhosa speaker. It meant that I had to rely on the English explanation from the lecturer and on the fourth year student for assistance in verifying the meaning of the English terms. In order to pick up any discrepancies, I decided to see how sound the terms would be in the text using HUB 223 lecture notes as source text.

4.3.2 Use of terms in the text

While the textbook was used for thorough understanding of the terms in conjunction with consultation with the lecturer, it was not used much as the major provider of the text. Instead, the terms were mostly used in the lecture notes as the lecture notes were more accessible and could be easily translated from English to isiXhosa. Secondly, they were used to label the diagrams that were found in the textbook and the lecture notes. The reason to use lecture notes instead of the textbook was due to the fact that 1) they were the principal material that was used by the lecturer to disseminate knowledge to the students who in turn could go and read further from the textbook in order to gain more insight; and 2) there were also socioeconomic challenges which saw some students unable to acquire the textbook in time and thus relied on the lecture notes or internet for supplementary knowledge. The terms created were used in the same lecture 1 notes. They were then presented to three randomly chosen Nursing students who were residing in my corridor, doing their third year. Those students found interest in the development of terminology and were familiar with the notes on Anatomy of the heart. They agreed to the role-play where they would assume the role of second year students and I would assume the role of a lecturer giving the lecture on the topic at hand in isiXhosa. Upon presentation of the lecture, there were discrepancies which led to the changing or re-modification of some terms.

4.3.3 Changing of the terms

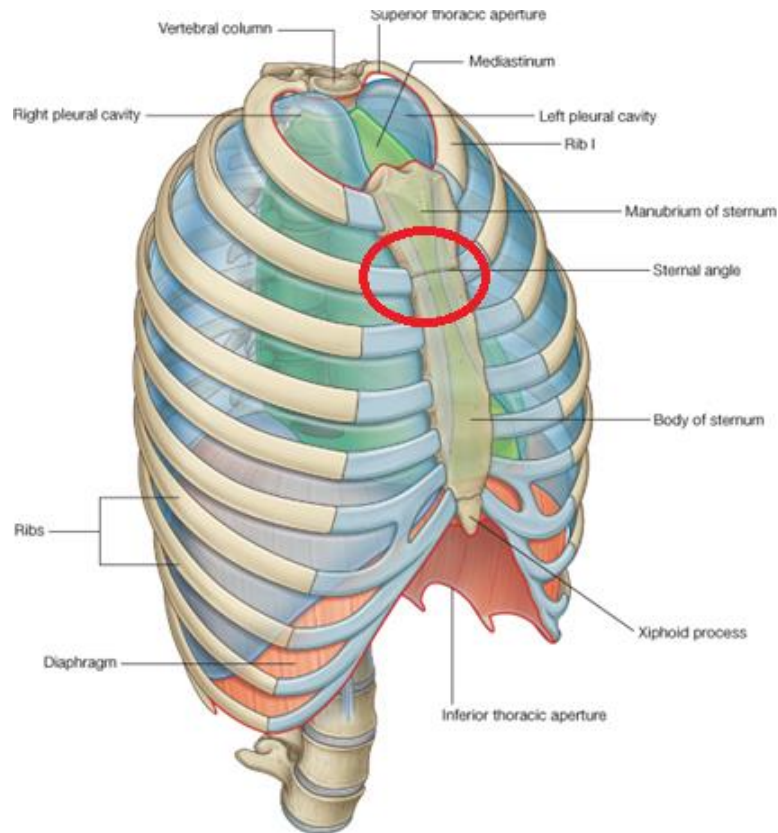
While terms were developed following the theories of term development, there were terms whose equivalents were found in isiXhosa dictionaries but were not conducive for use in some contexts as they were not displaying the true nature for which the scientific terms stand or simply, were not translating to a better understanding of the concept. This is usually because one term, particularly in isiXhosa, can be used for different terms in English depending on that particular context. This becomes complex if the term used may be understood differently in another context. A particular example is the term '*imbombo yethambo lencum*' (sternal angle). This adoption was later found by the third year students and the fourth year student to be misleading and confusing, because the term created did not give a clear meaning when translated or created in isiXhosa. In fact, it was seen as creating confusion instead of improving

comprehension. 'Imbombo' is translated from the term 'angle', while at the same time it is used to refer to a 'corner'. The confusion therefore, was the fact that for the role players, the term seemed to lead them into thinking that it is a corner of the bone which does not make sense. In such a situation, modification of existing resources is needed. Sager (1990) also recommends that sometimes, when such difficulty manifests, an alternative technique can be explored. According to Sager, the polysemic nature of general language designations allows such consideration. This is where, instead of saying something is like this, we can call or name it as the thing it resembles the closest. Therefore, as part of modifying the existing resources, in the source text for the term 'sternal angle', 'angle' was seen as fitting, however, in the target language, because of the general use of the term '*imbombo*' which generally refers to 'corner', the term created confusion to the role players as well as the fourth year student with whom I was working. This led to the replacement of the term '*imbombo*' with the term '*umvambo*' which is more comprehensible. As a result, the adoption of the term '*umvambo wethambo lencum*' was adopted and was welcomed by the role players as well as the fourth year student. They indicated that the new term, '*umvambo wethambo lencum*' was more comprehensible as it indicated that there is a part within the body of the bone (sternum) that resembles a scar-like line/shape on the bone (sternum). The diagram below (figure 4.7) best illustrates this where the 'sternal angle is circled in red to show how '*umvambo wethambo lencum*' looks like:



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FIGURE 4. 2: SHOWING TERMS COINED FROM RESEMBLANCE



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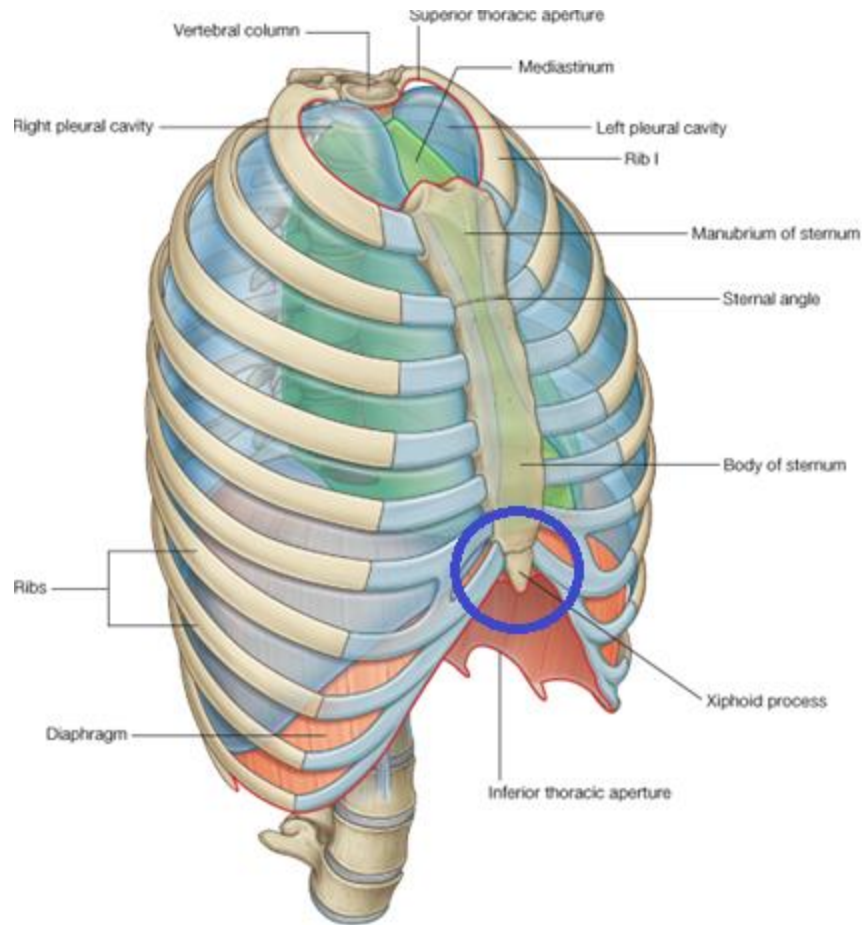
Equally so, the term 'xyphoid process' was another term that posed the same challenge to the role players. 'Xyphoid' basically refers to something that is 'shaped like a sword', while 'process' refers to "a prominent or projecting part of an organism or organic structure" (Merriam Webster Online Dictionary). To combine those two meanings would have led to a complex term which in isiXhosa would have proved to be incomprehensible. In fact, the role players claimed not to understand what is meant by 'xyphoid' and thus the term initially created did not seem to improve their understanding. The term initially was created according to the borrowing strategy, leading to '*izayfoyidi prosesisi*'. I found it quite interesting that they claimed not to understand what was meant by 'xyphoid' and their suggestion for another word in isiXhosa to clearly illuminate understanding. I therefore asked for the reason for the suggestion. One responded saying that most of the time they cram their notes so that they could just pass because they do not have time to read and understand. Although we had such a conversation, they refused to have me

record the activity, saying they were just helping out and are not interested in fully participating and be recorded.

Creating another term in isiXhosa for ‘xyphoid process’ meant I had to adopt another strategy. I therefore decided to use existing resources as it also meant that I could “explore the polysemic nature of general language designations” (Sager, 1990: 72). In other words, designing the term for ‘xyphoid’ meant that, instead of restricting myself to a meaning provided from direct translation or borrowing, I could tap into various facets of meanings that could enable me to find the most suitable term for the concept. This meant that I could look at the functions of ‘xyphoid process’. For the term, the best strategy for its designation was to look at its features and where it is found in the body. To illustrate this designation of the term ‘*xyphoid process*’ (circled blue), it is better to present a diagram (figure 4.8) of this component:



FIGURE 4. 3: SHOWING TERMS COINED FROM RESEMBLANCE



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From the diagram above, we can see that the 'xyphoid process' is the bottom part of the sternum (circled blue). In fact, it resembles a tail of the bone. It is therefore the very reason that led to a designation of the term 'tail of sternum', which is literally translated to isiXhosa as '*umsila wethambo lencum*'. As a result the 'xyphoid process' was called '*umsila wethambo lencum*' in isiXhosa, a term appreciated by the role players as well as the fourth year student.

There were conflicting views with regards to the terms such as parasympathetic and sympathetic nervous system. It was found difficult to accept the initially proposed terms such as '*inkqubo yemithambo-mivo yovelwano*' for sympathetic nervous system, and '*inkqubo yemithambo-mivo yokuthomalalisa*' for parasympathetic nervous system. Both these terms according to the role players as well as the fourth year student seemed to be misleading. Firstly,

it was the term ‘system’ that seemed to spark the debate. They (role-players) claimed to understand ‘*inkqubo*’ as ‘process or program’ and thus for them created a confusion. One out of the three seemed to understand that in translation projects, the term ‘*inkqubo*’ for systems has been widely used. I looked at the isiXhosa dictionary, which provided different translations for the term ‘system’. Most of the translations were explanations rather than equivalents. There was one particular translation for ‘system’, which was provided as ‘*isixokelelwano*’. Understanding that the term is hardly used, I decided to adopt it since it provide the advantage of being one word.

Moreover, there was another challenge to the translation of the term ‘sympathetic’ in ‘sympathetic nervous system’. In isiXhosa, the equivalence for sympathetic is ‘*ukuvelana*’. When the role players heard of that term, they burst out in laughter, saying it sounded strange. However, the fundamental point regarding the term was its functions. The sympathetic nervous system is responsible for the activation of nerves to respond to emotions like shock, anger, etc., as there is an increase in blood flow – the heart beating faster. On the other hand, parasympathetic nervous system does the opposite, where there is an activation that slows your heart rate, being calm, resting, etc. Therefore, the initial proposal was rejected by the role players, reminding me that I need to adopt terms that provide not just equivalence but comprehension. In that way, I decided to look at the function of the terms. From the function, I came up with terms such as, ‘*isixokelelwano semithambo-luvo yentshukumo*’ (where *ntshukumo* is ‘movement’ in English) for ‘sympathetic nervous system’, while at the time proposed ‘*isixokelelwano semithambo-luvo yokuzola*’ (where ‘*ukuzola*’ is ‘to relax’ in English) for parasympathetic nervous system. Although the role players were undecided about the terms, they agreed that it did somehow make sense.

All the terms translated were sent to the isiXhosa translator found at UWC, a professional who is also registered for South African Translators Institute (SATI). He acknowledged that most of the terms created were fairly new, in fact, some of the terms he had never come across. Furthermore, he also explained that because he was not a specialist in the Nursing field, it was quite difficult to reject or adopt the terms. Furthermore, he also acknowledged that the terms made sense but suggested that it would have been best if most terms that were created which were not readily available in isiXhosa were borrowings from the English terms rather than new terms that nobody knew.

It is on such a basis that I decided to remain with the terms I created because of the following reasons:

- While the technology is constantly expanding, terminology development in African languages should not wait for language officials to decide when that should take place.
- African languages can no longer rely only on English for term creation, i.e. rely on borrowed terms.
- While terms are not yet available, preliminary terms that best explain the concept should be adopted in order to supplement knowledge.
- The best language developers are not only those who are language specialists but the users of the language themselves; therefore, the more they get exposed to the terminology, the faster it grows and that means translates to language growth.

4.4 Presentation of the lecture, glossary and DVD

After receiving feedback from the translator, I decided to make a presentation of the whole of lecture 1 which was going to be disseminated to those who were to participate in the study. This was important to ensure that those who did not believe that isiXhosa has a place in the academic sphere could witness with their eyes the provision of such materials. It began with glossary terms being introduced at the beginning of the presentation. This means that from the original English lecture notes, more lecture slides on the isiXhosa presentation were added.

4.4.1 Provision of glossary

The slides which were added at the beginning of the presentation contained glossary terms. The terms were introduced to ensure that by the time the participants understood the crux of the lecture, i.e. when the terms were used in text in the lecture, they already had an idea of the meaning of the isiXhosa term and what it stood for. The diagram below (Figure 4.4) illustrates the manner in which the terms were introduced:

FIGURE 4. 4: SHOWING GLOSSARY AS IT APPEARS IN THE VIDEO

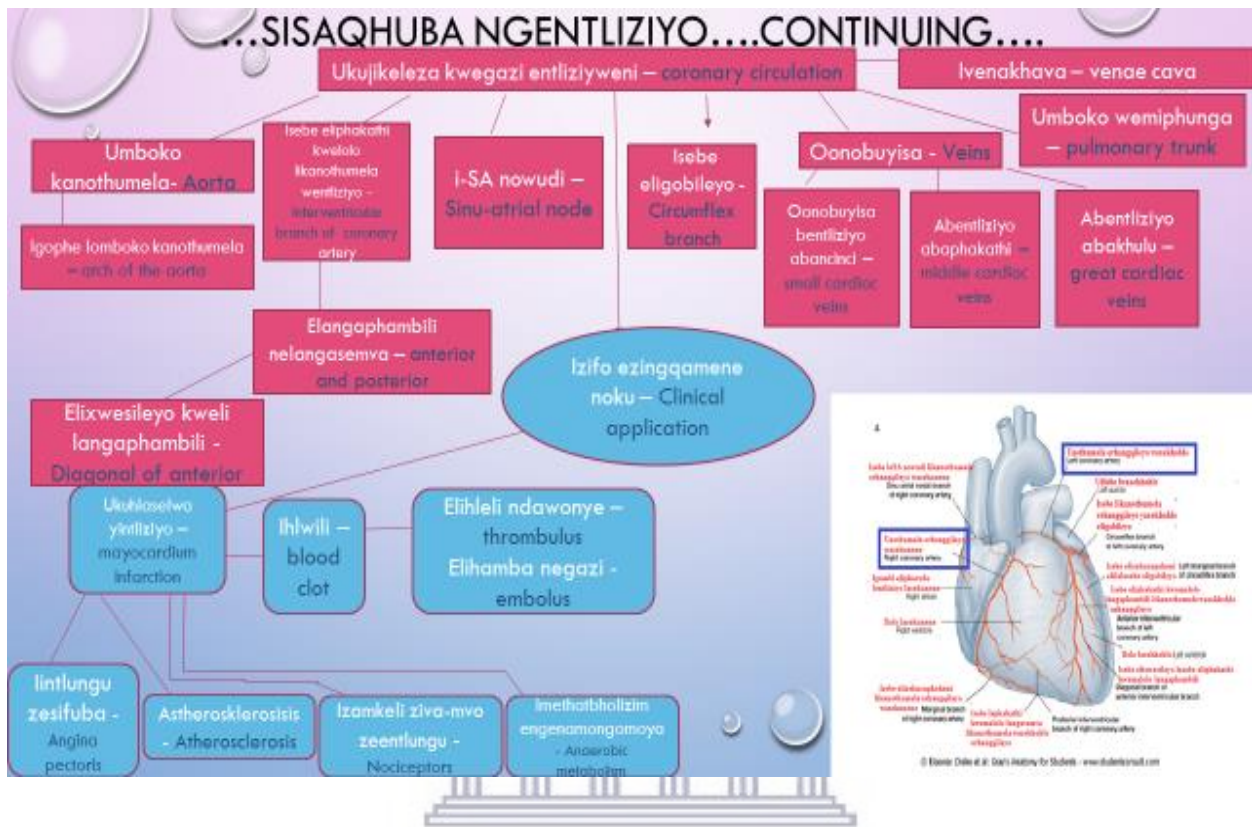
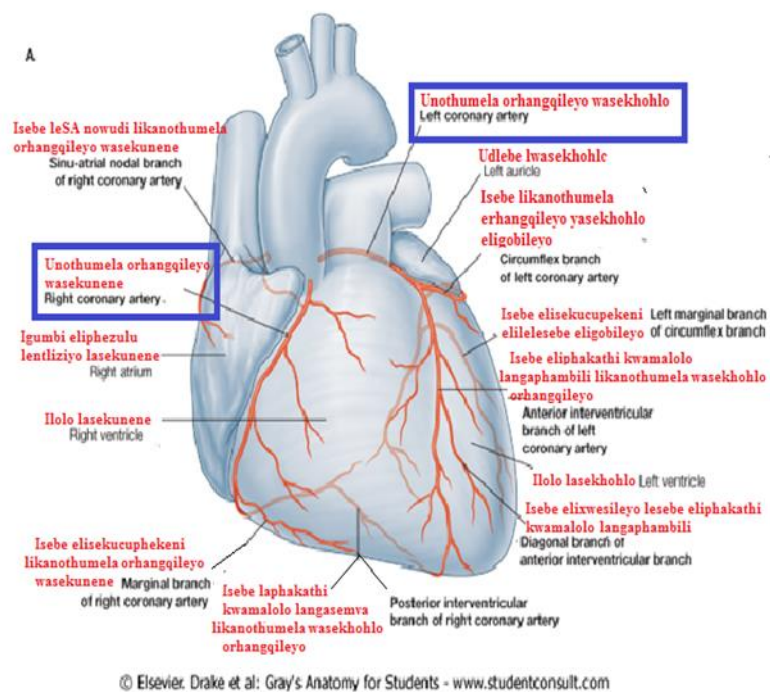


Figure 4.4 shows the purple blocks which contain the created terms found in the text. Next to the terms are the English equivalents. This was to ensure that while the participants / students see the term in isiXhosa, they also see its equivalent in English. For instance, we have ‘*umboko wemiphunga*’ in isiXhosa and next to it the English term ‘pulmonary trunk’. This way, it would enable them to see that ‘*umboko wemiphunga*’ is actually a ‘pulmonary trunk’ without having to go to the glossary. This was also created to ensure that by the time they get to the actual text, they already have an idea of what the isiXhosa terms stand for. Moreover, while the lecture notes presented the terms which refer to parts of the heart (purple), the blue blocks presented the concepts which deal with clinical application. The clinical application refer to some diseases associated with that part of the heart. The isiXhosa clinical application terms had also had equivalents in English next to them. For instance, ‘*ukuhlaselwa yintliziyi*’ can actually be seen by the student to mean ‘myocardium infarction’.

In addition to the provision of the glossary were the labelled diagrams of the heart, where each part could be found in the heart. The original lecture in English also had the English labels. I decided to also include the labelled diagrams in both English and isiXhosa so that the participants interested in isiXhosa could see where each part of the heart was found. Figure 4.5 shows the diagram, which has labelling in both isiXhosa and English:

FIGURE 4. 5: LABELLED DIAGRAM OF A HEART AND ITS COMPONENTS



While the participants could see the terms in the introduction, the diagram also enabled them to see where the terms could be found in relation to the heart. That way they could not just imagine where the terms were but also see where these parts were found in the heart.

However, the glossary was not only provided at the beginning of the presentation but also at the end of the slides together with definitions. This was to ensure that the participants could read the definition in order to enhance their understanding. It needs to be acknowledged that while the participants claimed to be isiXhosa mother-tongue speakers, the study by Antia and Dyers (2014)

shows that some isiXhosa students find it hard to read in isiXhosa. This led to the production of recorded DVD presentation.

4.5 Formation of DVD

Initially, the production of a DVD was not part of the planned process of providing learning materials, but it was necessary to produce it. The reason for this was to attempt to create a scenario where isiXhosa was used for a higher function especially in the learning environment. The DVD can be found under this link:

<https://drive.google.com/open?id=1SvykQ4Xzn6KZg3hkyELZ-Vo2HOWVMndR>.

According to Cummins and Duibhir (2012), the introduction of technological tools allows for alternative ways of expression and the possibility of reducing the disadvantages that additional-language users face. In fact, he argues that it has been adequately demonstrated over and over that allowing students to express their ability in ways that suit them, given that a range of options are presented, enhances their self-belief and confidence. Similarly, once participants in the study see the actual use and advantages of the use of isiXhosa in such presenting their module, their confidence would increase and so would be their willingness to participate.

Cummins and Duibhir (2012) also argue that over time, the focus has shifted from course materials, to the individual, to the learning environment, to issues of learner identity and learner autonomy. While Cummins and Duibhir's work was focusing more on language learning, the production of learning materials for HUB 228 focused more on a cognitive approach to subject and concept learning, where the internal processes in the learner's brain were seen as most influential. They even go further to say that "the advent of digital technologies in recent years has provided new ways to enhance the learning environment and caused a further reconceptualisation of the field" (Cummins and Duibhir, 2012: 12). The shift to other tools such as the production of a DVD therefore serves as another alternative to the learner's cognition of difficult concepts. In other words, the use of a DVD presentation allowed learners not just to read

what was presented (as in lecture slides only) but to be able to visualize and see what the concepts referred to.

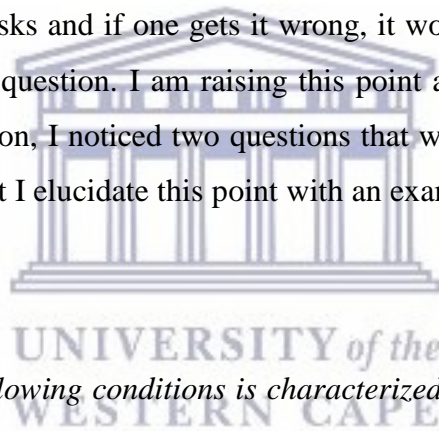
Although I am not an expert in the module, I tried to study as much of the materials I was provided with by the HUB lecturer. I furthermore made use of the internet in order to equip myself with more information on the topic. The idea was that, unlike the translation of lecture slides, the presentation of the lecture was to allow for further explanation of the concepts in isiXhosa. That way, the participants were able to visualise what was said in the presentation and thus gain a better understanding. In order to achieve my goal, I had to constantly practise, first with my linguistics Professor, then the role payers (third year students) as well as the fourth year student. When I felt that I was ready for the recording of the presentation, I obtained a flashback express recorder which could easily be downloaded on the internet. This software enabled the user to record on-screen presentations and the mouse pointer can move to a direction desired while recording. The recording of the presentation required a sound-proofed area. However, because of a scarcity of such an area, I decided to use a recorder from a Samsung J1 ACE cell phone to record the voice while using a laptop for the recording of the presentation. Afterwards, both the presentation and voice recording were synchronised together and edited to produce a better presentation which was then uploaded to a DVD. The DVDs were 123 minutes long. About 35 DVDs containing the presentation were distributed to the participants prior to the test task mentioned in the previous chapter.

The distribution of the DVDs took place twice. The first time was in the class where not many participants were present. The second time was in the library where the participants were requested to avail themselves at a certain time in order to get their copy. During the second distribution of the DVDs, the participants were preparing for a test in the same module that I was working on. However, their assessment was covering lecture 1 as well as other chapters. Although the comments were not recorded, one of the learners who had obtained the DVD from the first distribution was seen accompanying friends who came to collect the DVDs. He was observed commenting that while watching the DVD, he felt like a friend was explaining the difficult concepts which he did not understand. Others who also tagged along with friends pleaded with me that I make more of the isiXhosa lecture materials for other chapters available.

4.6 The translation of test questions

Having been given the isiXhosa learning material to engage with it, a test that evaluates whether or not the material enhanced any understanding of their module was given to the participants.

While I cannot say it on behalf of the participants, it is well known that those who speak English L1 in academic spheres in South Africa are at an advantage. This is because most content subjects are in English. Among other reasons, the advantage has to do with not having to grapple with the English language itself before understanding the content, which is a prominent challenge for ESL students. This brings me to the analysis of some of the questions that were asked in the question paper. In an examination, English L1 students are always on an advantage in education in South Africa. This is because as an English L1 speaker one will be able to understand what the question asks and if one gets it wrong, it would not be because English L1 student did not understand the question. I am raising this point as a matter of interest because, while looking at isiXhosa version, I noticed two questions that were giving away the answer by translation default. It is best that I elucidate this point with an example. Question 6 in the English text was as follows:



6) Choose which one of the following conditions is characterized by inflammation of the serous pericardium.

- a) *pericarditis*
- b) *pneumopericardium*
- c) *pericardial effusion*
- d) *angina pectoris*
- e) *cardiac tamponade*

The answer to the question is a). For an EMT person, this question may seem straightforward. However, to someone who is ESL this question may not be a straightforward question, it may need a little bit of translation, unless one has crammed the answer already. Let us look at a

situation whereby the ESL student may have not studied properly, chances are, the student might take a guess. However, if one looks at the terminology developed on isiXhosa learning material for the condition asked by the question, the answer is a giveaway. Now, let us look at the isiXhosa question below:

6. *Khetha ukuba yeyiphi imeko okanye isifo esiphawuleka ngokudumba kolwambesi olunkovu/olumanzirha kwezi zilandelayo.*

- a) ukudumba kolwambesi*
- b) ukuzala komoya kulwambesi*
- c) ukuphuphumala kolwambesi*
- d) iintlungu zesifuba*
- e) uxinizelelo lwentliziyo*

The answer on both versions is a). However, the interesting part about the translation on isiXhosa version is that ‘Ukudumba kolwambesi’ is literally translated as inflammation of pericardium. One can argue that an unfair advantage was given to those who answered isiXhosa version.

On the other hand, let us look at a different example of a question, which was not in this test whereby the advantage is on both English or isiXhosa version. Let us start again with the English version.

Choose which one of the following conditions is characterized by increased amounts of fluid within the pericardial sac, usually due to inflammation.

- a) pericarditis*
- b) pneumopericardium*
- c) pericardial effusion*
- d) angina pectoris*

e) *cardiac tamponade*

The isiXhosa version is as follows:

Khetha ukuba yeyiphi imeko okanye isifo esiphawuleka ngokunyuka kwezinga lencindi ekwisingxobo solwambesi, esiqhele ukwenziwa kukudumba.

a) *ukudumba kolwambesi*

b) *ukuzala komoya kulwambesi*

c) *ukuphuphumala kolwambesi*

d) *iintlungu zesifuba*

e) *uxinizelelo lwentliziyo*



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From the example 2 both the versions are advantageous to both EMT and ESL.

4.7 Conclusion

To summarise, this chapter discussed the development of learning materials gave a breakdown of the processes followed in producing new terms. As indicated before, creation of terms is not a straight-forward process, it requires a range of strategies which included using existing resources, and the modification of existing resources, amongst others. One thing is clear though - while there is a scarcity of terminology in African languages, the chapter showed that it is not impossible to provide such languages with terminology which they are in desperate need of. Moreover, the chapter also showed that it is not enough to come up with the term, but that it is also necessary to test the term developed to ensure that it is understandable, makes sense and does not deviate from the meaning intended. For example, the difficulty that was experienced in the term ‘sternal angle’ could have meant deviation from the meaning, hence the change.

CHAPTER FIVE

DATA PRESENTATION

5.0 Introduction

This chapter presents the data collected, bearing in mind the methods of data collection discussed in chapter three. This chapter presents results that deal with attitudes and outlining their components as discussed in chapter two. Furthermore, the chapter will present results on the intervention test that was administered to the respondents who took part in the study. The focus group discussion, as another dataset, was also conducted and its responses will be presented. Essentially, this chapter is divided into three sections. The first section deals with questionnaire responses on attitude, separating each attitude component. The second section will present test results, highlighting the different results obtained from both the English and isiXhosa versions. The third section is composed of a third dataset, which is a presentation of focus group discussion.

5.1 Section A: Presentation of questionnaire responses

This section presents the results from the questionnaire responses. This section presents the results on the attitudes of the participants about the use of isiXhosa in their university studies, before and after the intervention. Section A will point out any changes that have occurred in the attitudes scores after intervention. The presentation of the data on attitudes also looks to draw on, among others, the following research questions mentioned in the first chapter of this thesis:

- What are the initial attitudes of nursing students (who identify as isiXhosa speakers) regarding the use of isiXhosa materials as an additional resource in their studies?
- What are the attitudes of the same group of students after they have made use of isiXhosa disciplinary materials?

It is worth mentioning that, since these were two-part questionnaires (pre-test and post-test), the data is presented in accordance with the responses on both those questionnaires. Although each questionnaire was divided into two sections, i.e. the first part consisted of the background of the respondents, while the second section consisted of responses pertaining to the statements that required responses (such as Strongly agree, Agree, etc.) using the Likert scale as a way to measure such attitudes, the researcher was more interested in the second section of the questionnaire.

The results are made up of both pre-test and post-test scores of all the participants who took part in the administration of questionnaires, conducted prior and post intervention. In addition to that, the post-test questionnaire, in terms of the statements posed as well as how the scores were measured and presented, was exactly the same as that of the pre-test. The aim was to evaluate how similar or different the respondents' scores would be from the pre-test questionnaire, compared to the post-test scores. However, the number of respondents who participated in the post-test (N=24) was fewer than those who participated in the pre-test (N=35) administration of questionnaires. This is because some students had other academic duties to attend to. Although there was a difference in the number of respondents on both occasions, it does little to influence the scores attained on both pre- and post-intervention.

The tables showing the scores on each component are listed below. The first column represents the statement number according to the questionnaire, while the column that follows has the actual statements found in the questionnaire. This is followed by the column that has the percentage of the number of respondents who were pro-isiXhosa in the pre-test. The respondents' scores against isiXhosa prior to the intervention are also presented as well as those who chose to be indifferent. Similarly, the post intervention results follow the same sequence as that of the pre-intervention where the scores on pro, against, and indifferent about the use of isiXhosa in the HUB module are presented. In addition to that, the difference between the number of pre-test respondents and the number of post-test respondents who were pro-isiXhosa is calculated and presented in the last column. This is calculated by deducting the pro-isiXhosa pre-test score from the pro-isiXhosa post-test score. The result shows whether there was an improvement or a decline post-intervention in the number of respondents who were pro-

isiXhosa. However, the results are compartmentalised into the three components of attitudes, namely: cognitive, affective, and readiness for action.

5.1.1 Presentation of the cognitive component scores

The first component looked at is the cognitive component. This is what Baker (1992) refers to as the belief and knowledge individuals may have which helps to evaluate one's inner self with regards to that particular entity. It needs to be borne in mind that the statements were not strictly adhering to isiXhosa, i.e. there were some statements which included the preference to the use of English in comparison to isiXhosa or both. Below is the list of statements which addressed the cognitive component of the attitude. These statements were designed to evaluate the cognitive aspect of attitudes both on the pre-test and the post-test:

1. IsiXhosa can be used with English to teaching my HUB 228 module.
2. IsiXhosa can be used as the only language for teaching my HUB 228 module.
3. I would understand my HUB 228 module better and perform better in assessment tasks if isiXhosa were used in addition to English for teaching and providing lecture materials in the module.
4. If isiXhosa were used for teaching and providing lecture materials in my HUB 228 module, such use would not give me any advantage.
5. I even doubt that isiXhosa could be developed to such an extent that it could be used for teaching and providing lecture materials in my HUB 228 module.
6. Even if it were possible to use isiXhosa for teaching and providing lecture materials in my HUB 228 module, that could not happen now. It would take a very long time for the language to be developed, before it could be used.

7. IsiXhosa may be suitable for university courses in the Arts and Social Sciences, but not in the sciences.
8. English is the only language that is suitable for use in teaching and providing lecture material in my HUB 228 module at university.
9. IsiXhosa cannot be used as language of teaching and providing lecture materials in university courses in the sciences.

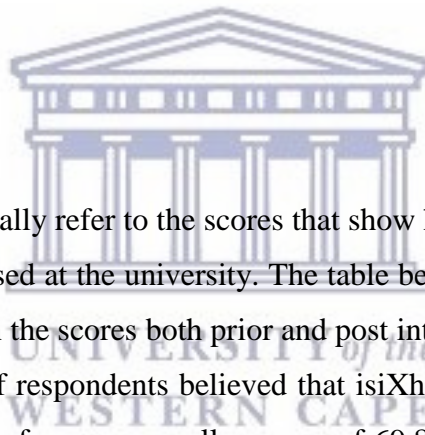
Similarly, the scores for the responses were distinguished by the researcher according to the statements. The following table is the representation of responses on pre-test questionnaires that evaluated attitudes with regards to the cognitive component of attitude. The results therefore illustrate the scores attained by the participants who were pro-isiXhosa, against isiXhosa, and indifferent. Below is the table that shows the overall cognitive component scores on both pre and post-test.

TABLE 5. 1: COGNITIVE COMPONENT OF ATTITUDE TABLE

Cognitive Component							
Statement No	Pre-test N=35		Post-test N=24		Diff between pre and post % (post-pre)	Pre-test	Post-test
	pro-isiXhosa respondents %	Against isiXhosa respondents%	pro-isiXhosa respondents %	Against isiXhosa respondents%		N=35	N=24
1.	62,9	20	58,3	41,7	-4,5	17,1	0
2.	60	17,1	54,2	33,3	-5,8	22,9	12,5
3.	68,6	20	58,3	33,4	-10,2	11,4	8,3
4.	40	37,1	41,7	45,8	1,7	22,9	12,5
5.	68,6	17,1	25	58,3	-43,6	14,3	16,7
6.	82,9	14,2	41,7	50	-41,2	2,9	8,3
7.	74,3	2,2	66,7	4,1	-7,6	22,9	29,2
8.	45,7	34,3	54,2	20,8	8,5	20	25

9.	97,1	0	100	0	2,9	2,9	0
11.	94,3	2,8	87,5	4,2	-6,8	2,9	8,3
12.	77,1	17,2	41,7	37,5	-36	5,7	20,8
16.	65,7	22,9	62,5	12,5	-3,2	11,4	25

Table 5.1 shows responses with regards to the cognitive component of attitudes. Twelve statements in the questionnaire, in the above table, investigated the beliefs of the respondents on the use of isiXhosa in their module. The results show that there was less improvement in the cognitive component of attitude. For instance, only three out of the twelve statements show improvement on the cognitive component of attitudes. However, there are interesting patterns in the results. This can be explained by breaking down the results according to three dimensions, namely: pro-isiXhosa, against isiXhosa, and indifference. Each dimension is looked at separately.



(i) Pro-isiXhosa responses

Pro-isiXhosa responses basically refer to the scores that show how many respondents believed that isiXhosa is suitable to be used at the university. The table below shows that, while there is a considerable difference between the scores both prior and post intervention, it is clear in the table below that a sizeable number of respondents believed that isiXhosa is suitable to be used at the university as LoLT. This is seen from an overall average of 69.8 per cent prior intervention and 57.7 per cent post-intervention as shown on both pre- and post-intervention scores in the table below.

TABLE 5. 2: SHOWING PRO-ISIXHOSA RESPONSES ON COGNITIVE COMPONENT

Statement No	Pro-isiXhosa respondents % (Pre-test) N=35	Pro-isiXhosa respondents % (Post-test) % N=24	Diff between pre and post % (post minus pre)
1.	62,9	58,3	-4,5
2.	60	54,2	-5,8
3	68,6	58,3	-10,2
4.	40	41,7	1,7

5.	68,6	25	-43,6
6.	82,9	41,7	-41,2
7.	74,3	66,7	-7,6
8.	45,7	54,2	8,5
9.	97,1	100	2,9
11.	94,3	87,5	-6,8
12.	77,1	41,7	-31,4
16.	65,7	62,5	-3,2
Average	69,8	57,7	

Table 5.2 shows that little improvement took place among respondents on the belief component of attitude post-intervention. In fact, it is interesting that more respondents believed that isiXhosa learning materials could be incorporated into university studies (an average of 69.8 per cent prior intervention) than post-intervention respondents (an average of 57.7 per cent). The pro-isiXhosa responses prior intervention show more beliefs in the incorporation of isiXhosa when compared to post-intervention responses. In other words, out of 12 statements in the questionnaire, the prior intervention responses show that in nine statements, the responses indicate decline in attitude beliefs, leaving only three statements where the improvement in attitude belief is observed. For instance, if one looks at statement 1, the 62.9 per cent of the respondents, prior the intervention, believed that isiXhosa could be used as LoLT in the teaching of HUB module, while on the same statement, only 58.3 per cent of respondents showed the same belief post-intervention, as illustrated in table 1. This means that the difference between the number of pro-isiXhosa respondents prior and post-intervention on statement-1 is minus -4.5. This decline on attitude is noticeable in the rest of the statements with the exception of statements 4, 8 and 9 where the improvement on attitude belief is visible. This shows that the difference between pre- and post-scores also shows more negative improvement on cognitive component of attitudes as illustrated in the last row, where only statements 4, 8 and 9 show positive improvements. In other words, the difference between pre- and post-responses is negative in 9 out of twelve responses.

While it is clear that there was a decline in attitudes in this component, I particularly found it interesting that some statements had a noticeably higher or lower percentage of respondents being pro-isiXhosa. For instance, in statement-4, which states, *'even if it were possible to use*

isiXhosa for teaching and providing lecture materials in my HUB 228 module, that could not happen now. It would take a very long time for the language to be developed, before it could be used', the scores show a lower percentage of respondents who were pro-isiXhosa on both pre- (40 per cent) and post-tests (41.7 per cent). This is particularly interesting given that in many statements the number of respondents is high. Given the nature of the statement, it is obvious from the responses that many respondents believed that it would indeed take some time for isiXhosa to be developed to such an extent that it could be used to provide the lecture materials, although the respondents have seen the intervention.

Similar trends are also evident in statement 8, which states: *'IsiXhosa can be used as the only language for teaching my HUB 228 module'*. A low percentage is observed on both occasions (pre- and post-intervention). For instance, prior intervention, the score is recorded as 45.7 per cent, while it is 54.8 per cent post-intervention. Although there is still 8.5 per cent improvement in attitudes, this shows that even though respondents received material in isiXhosa, they still had doubts about isiXhosa being the sole language of teaching and learning in their HUB 228 module.

However, if one looks at statement 9 which states: *'IsiXhosa can be used with English in teaching my HUB 228 module'*, it is interesting to observe a very high number of respondents on both pre- and post-intervention (97.1 and 100 per cent respectively). This shows that many respondents believed that the parallel use of English and isiXhosa, i.e. using isiXhosa alongside English, could prove effective.

(ii) Against isiXhosa

Similarly, the responses against the incorporation of isiXhosa materials were looked at. It appears that fewer respondents were against the incorporation of isiXhosa prior the intervention when compared to post-intervention, as table 5.3 below illustrates.

TABLE 5. 3: AGAINST ISIXHOSA

Statement No	Against isiXhosa % (pre) N=35	Against isiXhosa % (post) N=24	Diff between pre and post % (post-pre)

1.	20	41,7	21,7
2.	17,1	33,3	16,2
3	20	33,4	13,4
4.	37,1	45,8	8,7
5.	17,1	58,3	41,2
6.	14,2	50	35,8
7.	2,2	4,1	1,9
8.	34,3	20,8	-13,5
9.	0	0	0
11.	2,8	4,2	1,4
12.	17,2	37,5	20,3
16.	22,9	12,5	-10,4
Average	17,1	28,5	

While there was an observable number of respondents who were against the incorporation of isiXhosa, Table 5.3 shows that many of them were more against isiXhosa after intervention, with an average of 28.5%. This means that a higher percentage of respondents after intervention were against isiXhosa when compared to the respondents prior the intervention. In other words, the average number of respondents post-intervention was 28.4 per cent while prior intervention, the average was 17.1 per cent. Some scores are observed reaching 50 per cent (statements-5 and 6) post-intervention, while prior intervention, the highest score reached is 37.1 per cent. This means that in most statements, with the exception of statements 8 and 16 post-intervention, more respondents were against isiXhosa, i.e. they did not believe that isiXhosa could be used in university studies even after intervention.

To explain this differently, it is best to highlight the statements that show a vast number of respondents against isiXhosa. It is clear, particularly in statement-5, that the respondents lacked the belief that isiXhosa could be developed to an extent that it could be used for teaching or to provide lecture materials in their module. This statement reads: *'I even doubt that isiXhosa could be developed to such an extent that it could be used for teaching and providing materials in my HUB 228 module'* A small number of respondents showed little doubt that isiXhosa could be developed for teaching and learning, noticeable from the score of 17.1 per cent prior intervention. However, 58.2 per cent of respondents showed doubt that isiXhosa could be developed to such an extent that it could provide learning materials, even after the respondents

were provided with lecture materials in isiXhosa. These results show a decline in beliefs by respondents.

Such a decline in beliefs is also observed in statement-6, which state: '*If isiXhosa were used for teaching and providing lecture materials in my HUB 228 module, such use would not give me any advantage*'. Few respondents (14.1 per cent) were against the belief that isiXhosa would give them an advantage if it were used to provide lecture materials. However, post-intervention, the number of respondents increased to 50 per cent. This is another interesting observation given that, prior intervention, a lesser number of respondents disagreed with that statement.

Furthermore, as observed in the results, are the two statements that show improvements in the cognitive component of attitudes against isiXhosa. This is noticed in statements 8 and 16. Statement-8 states: '*IsiXhosa can be used as the only language for teaching my HUB 228 module*'. Prior intervention, 34.3 per cent of respondents were against the belief that isiXhosa could be used as the only language of teaching and learning, as observed in table 2. However, 20.8 per cent of respondents were seen to be against the statement, post-intervention, a number (13.5 per cent) lower than that of pre-intervention scores. In addition to that, in statement-16, which states: '*Using isiXhosa as one of the languages for teaching and providing lecture materials in HUB 228 would unnecessarily increase my workload*', many respondents (22.9 per cent), prior intervention, were against the belief that such a statement could be true. In other words, they were against isiXhosa.

However, post-intervention, a few of them showed belief against such a statement. This means fewer respondents, post-intervention, were against isiXhosa when compared to the respondents, prior intervention. Clearly, there is a contradiction in the way the respondents perceive the use of isiXhosa in their module, especially when one looks at these two statements.

It is also worth mentioning that, while a large number of respondents were pro-isiXhosa, in statement-9, as discussed previously (see Table 1), none of the respondents were against isiXhosa on both pre- and post-interventions. This is the statement which reads: '*IsiXhosa can be used with English in teaching my HUB 228 module*'. Obviously, in this statement, the respondents were not against isiXhosa in this statement. This is an interesting result, which will be discussed in the next chapter.

(iii) Indifferent

While many respondents expressed their beliefs in statements on the cognitive component of attitude, there were those who wished not to negate or affirm the statements in the questionnaire. In other words, they neither agreed nor disagreed with the statements and thus chose to be indifferent. This is seen from the third dimension in which the scores are looked at. Observed are the scores on both the pre-test and post-test questionnaires in the table below.

TABLE 5. 4: SCORES ON INDIFFERENCE

Statement	Indifferent pre-test %N=35	Indifferent post-test % N=24	Diff between pre and post % (post- pre)
1.	17,1	0	-17,1
2.	22,9	12,5	-10,4
3	11,4	8,3	-3,1
4.	22,9	12,5	-10,4
5.	14,3	16,7	2,4
6.	2,9	8,3	5,4
7.	22,9	29,2	6,3
8.	20	25	5
9.	2,9	0	-2,9
11.	2,9	8,3	5,4
12.	5,7	20,8	15,1
16.	11,4	25	13,6
Average	13,1	13,9	

Table 5.4 shows that on several statements, more respondents chose to stay indifferent post-intervention. Many post-intervention respondents chose to be indifferent on seven statements (statements 5, 6, 7, 8, 11, 12, and 16), while prior the intervention, respondents remained indifferent on 5 statements (statement 1, 2, 3, 4, and 9). Even when the pre- and post-average scores were calculated, there was no major difference in scores as the average for pre-intervention is 13.1 per cent while the post-intervention score is 13.8 per cent. This means many

respondents were not sure whether to agree or disagree with the statements on both occasions (prior and post-intervention) when their attitudes were evaluated.

However, it is worth noting that when one looks at individual statements, some statements showed a large number of respondents who wished to remain indifferent. In fact, in some statements the scores reached only 22 per cent. For instance, statement-2, which states: *'English is the only language that is suitable for use in teaching and providing lecture material my HUB 228 module at university'*, many respondents (22.9 per cent) remained indifferent prior intervention, but were much more decisive post-intervention as there were only 12 per cent of them who remained indifferent.

This also seen in statement-4: *'even if it were possible to use isiXhosa for teaching and providing lecture materials in my HUB 228 module, that could not happen now. It would take a very long time for the language to be developed, before it could be used'*. The 22.9 per cent of respondents were also indifferent prior intervention, while post-intervention, a mere 12 per cent remained indifferent.

Although a similar case may be said about statement-7, which states: *'I would understand my HUB 228 module better and perform better in assessment tasks if isiXhosa were used in addition to English for teaching and providing lecture materials in the module'*, it appears that more respondents were indifferent post-intervention. In fact, 22.9 per cent of respondents, prior intervention, were indifferent while 29.2 per cent was indifferent post-intervention. This means more respondents were not sure whether to agree or disagree with the statement. In other words, even though they were provided with isiXhosa learning materials, they were not sure whether it would assist with their performance when it came to assessments. This is particularly interesting given the fact that they were given an assessment as part of the intervention.

While there were not many respondents who were against isiXhosa (12.5 per cent) in statement-16, post-intervention, many of them (25 per cent) were observed being more indifferent prior intervention. This means, even though there was no improvement in attitudes with regards to statement-16, many respondents were not necessarily sure whether to agree or disagree with the statement. For instance, prior intervention, 11.4 per cent of respondents were indifferent while post-intervention, 25 per cent of them remained indifferent. This is a difference of 13.6 per cent.

Essentially, when looking at the cognitive component of attitudes, the results show that prior intervention, many of the respondents believed that isiXhosa could be incorporated as a supplementary source of material to improve understanding of the HUB module. However, after the intervention, there was a drop in those beliefs, as seen from the scores under post-test results. This, ultimately, illustrates that there was a decline in beliefs of respondents after they were provided with lecture materials in isiXhosa. In addition to that, it is clear that a significant number of respondents were also against isiXhosa, particularly after they were provided with lecture materials in isiXhosa. This is seen on the results in table 2. Such results show a growing negative belief towards isiXhosa as LoLT even when provided with lecture materials.

Again, when one looks at table 3, some respondents chose to remain indifferent. In fact, more respondents chose to be indifferent post-intervention in comparison to pre-intervention. This means that, although they remained negative towards the incorporation of isiXhosa, some were not sure in their beliefs whether the incorporation of isiXhosa could be used in their HUB module. This is seen in post-intervention scores (in 5.1.1 (ii)) where many respondents' beliefs post-intervention were against the use of isiXhosa to supplement knowledge production. Ultimately, although there were three statements that showed improvement in the belief component of attitudes, it is obvious that many respondents were against the belief that the incorporation isiXhosa materials in the HUB module could be used before intervention. It will be interesting to see what happens to the scores attained in the test, which is one of the datasets that still needs to be presented in this chapter. Moreover, these observed attitudes with regards to the cognitive component are relevant in the following chapter that deals with the discussion of the results.

5.1.2 Presentation of the affective aspect

The next component of attitude that was looked at was the affective component. Petty, Fabrigar and Wegener (2003: 752) postulate that the affective component of attitude “consists of positive and negative feelings associated with attitude object”. This means that the affective component of attitude is associated with the likes and dislikes of the attitude object. There were four statements included in the questionnaire that dealt with the affective component and were not arranged in a particular order. These statements were included to see what the affective

responses of the respondents towards the incorporation of isiXhosa prior and post the intervention would be. Below is the list of statements which addressed the affective component of the attitude:

- 10. I would like isiXhosa to be used be as one of the languages for teaching and for providing lecture materials for my HUB 228 module
- 13. I would not at all like isiXhosa to be used as one of the languages of teaching and for providing lecture materials for my HUB 228 module.
- 15. It would make me very happy to see my home language being used to teach HUB 228.
- 17. I just don't want isiXhosa being used for academics.

The affective component of attitude has less statements when compared to the other two components of attitude (cognitive and readiness for action). The statements may be few, but in these statements, the results show a clear improvement of attitudes when comparing post-intervention to pre-intervention. The table below shows the overall results of respondents to the affective component of attitudes.

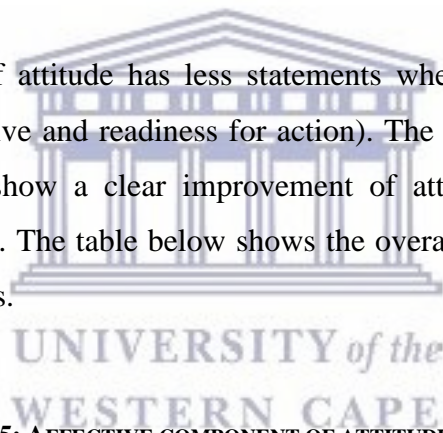


TABLE 5. 5: AFFECTIVE COMPONENT OF ATTITUDE SCORES

Affective Component							
Statement No	Pre-test N=35		Post-test N=24		Diff between pre and post % (post-pre)	Pre-test	Post-test
	Pro-isiXhosa respondents %	Against isiXhosa respondents%	Pro-isiXhosa respondents %	Against isiXhosa respondents%		N=35	N=24
10.	94,3	0	95,8	0	1,5	5,7	4,2
13.	85,7	11,4	79,2	16,6	-6,5	2,9	4,2
15.	97,1	0	100	0	2,9	2,9	0
17.	82,9	5,7	91,7	8,3	8,8	11,4	0

Table 5.5 shows diametrically opposite views to the cognitive component. For instance, more respondents showed more desire to see isiXhosa being used in the university as LoLT. To explicate this further, a breakdown of results into different tables was necessary. Similar to the previous component discussed, the responses are viewed according to the three dimensions, i.e. pro-isiXhosa, against isiXhosa, and indifference.

(i) Pro-isiXhosa

The table below shows that more respondents have vested feelings on isiXhosa being incorporated into their HUB 228 module. This is observed from the high number of respondents being in favour of its use in their module in all four statements prior and post-intervention.

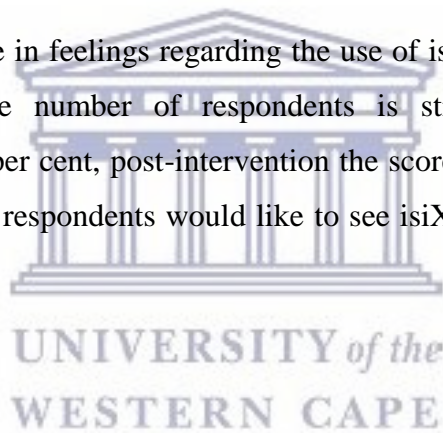
TABLE 5. 6: RESULTS SHOWING PRO-ISIXHOSA RESULT ON AFFECTIVE COMPONENT

Statement No	pro-isiXhosa respondents (Pre-test) N=35	pro-isiXhosa respondents (Post-test) % N=24	Diff between pre and post % (post-pre)
10.	94,3	95,8	1,5
13.	85,7	79,2	-6,5
15.	97,1	100	2,9
17.	82,9	91,7	8,8
Average	90	91,7	

Table 5.6 above shows that, although there were four statements that covered the affective component of attitudes, all four statements indicate the positive feelings the participants had towards the inclusion of isiXhosa. This is observed from a high percentage of respondents whose pro-isiXhosa scores were above 79 per cent before and after intervention. The high percentage is illustrated by the average on pre-test (90 per cent) and post-tests (91.7 per cent) intervention. Furthermore, three out of the four statements indicate responses that were in favour of isiXhosa

being used as language to produce learning materials in or induce knowledge production in their module. This means more respondents showed that they would like to see isiXhosa included in their module, for affective reasons. For instance, for statement 10, Table 6 illustrates that 94 per cent of respondents prior intervention were pro-isiXhosa and even more respondents (95.8 per cent) after intervention were pro-isiXhosa. This is also seen in statement 15 where 97.1 per cent of respondents were pro-isiXhosa, while for the same statement, 100 per cent of respondents were pro-isiXhosa post-intervention. Similarly, statement 17 shows 82.9 per cent of respondents being pro-isiXhosa, while the 91.7 per cent also shared the same sentiments. The results are also supported by the difference between pre- and post-intervention scores. This is where statement 10 shows improvement by 1.5 per cent; statement 15 showed improvement by 2.9 per cent, while statement 17 showed an improvement of 8.8 per cent. This shows that the respondents, prior and post-intervention had the desire to see isiXhosa being used in their HUB 228 module.

Even when there is a decline in feelings regarding the use of isiXhosa to provide material, as observed in statement-13, the number of respondents is still high. For instance, prior intervention, the score is 85.7 per cent, post-intervention the score is 79.2 per cent. This means, with regard to the feelings, the respondents would like to see isiXhosa being used as a LoLT in their HUB 228 module.



(ii) Against isiXhosa

The responses against isiXhosa on the affective component were observed. From the observation, it is safe to say that responses against isiXhosa were not as momentous. In fact, the table below illustrates that the scores against isiXhosa were very low.

TABLE 5. 7: AGAINST ISIXHOSA – AFFECTIVE COMPONENT

Statement No	Against isiXhosa respondents (Pre-test) N=35	Against isiXhosa respondents (Post-test) % N=24	Diff between pre and post % (post-pre)
10.	0	0	0
13.	11,4	16,6	5,2
15.	0	0	0

17.	5,7	8,3	2,6
Average	4,3	6,2	

Table 5.7 shows the scores the respondents produced against isiXhosa. Statements 10 and 15 showed that none of the respondents were against isiXhosa. Statements 13 (11.4 per cent) and 17 however, showed that there were respondents who were against isiXhosa both prior and post-intervention. For instance, prior intervention, statement-13 had 11.4 per cent respondents who were against isiXhosa, while 16.6 per cent of respondents post-intervention were against it. Similarly, in statement 17, 5.7 per cent of respondents were against isiXhosa prior intervention, while 8.3 per cent of respondents were against isiXhosa post-intervention. This means that the average percentage of respondents who were against isiXhosa, prior and post-intervention, is 4.3 per cent and 6.2 per cent respectively. Consequently, very few respondents felt that isiXhosa could not be incorporated in the university before and after intervention.

(iii) Indifferent

While some respondents chose to be for or against the incorporation of isiXhosa in their module, there was a portion who remained indifferent, i.e. they were not sure about their feelings with regards to the use of isiXhosa in their module. The table below shows the responses on the affective component with respect to indifference.

TABLE 5. 8: INDIFFERENT SCORES – AFFECTIVE COMPONENT

Statement No	Indifferent respondents pre-test % N=35	Indifferent respondents post-test % N=24	Diff between Pre & Post
10.	5,7	4,2	-1,5
13.	2,9	4,2	1,3
15.	2,9	0	-2,9
17.	11,4	0	-11,4
Average	5,7	2,1	

Table 5.8 shows that a small number of respondents were indifferent to the desire to incorporate isiXhosa in their HUB 228 module. This is observed in the table above where the highest percentage of respondents who chose to be indifferent was 11.4 per cent. For instance, for statement-10 prior intervention, 5.7 per cent of respondents chose to be indifferent while post-intervention, only 4.2 per cent of respondents remained indifferent. Statement 13 had the lower percentage prior intervention of 2.9 per cent while 4.2 per cent of respondents were indifferent post-intervention. Statements 15 and 17 had 2.9 per cent and 11.4 per cent respectively prior the intervention, while none of the respondents chose to be indifferent in any of those statements after intervention.

Furthermore, when looking at the difference in respondents' pre- and post-intervention scores, it is evident that more respondents were indifferent prior intervention than they were post-intervention. This is observed from the scores for statement 10 (-1.5 per cent), 15 (-2.9 per cent), and 17 (-11.4 per cent). The average score on both pre- and post-intervention scores indicates this, where pre-intervention shows an average of 5.7 per cent, while post-intervention, the average is 2.1 per cent. In other words, out of four statements, three statements showed that more respondents were indifferent prior intervention than post-intervention.

What I can deduce from the affective component of attitude is that, while in the cognitive component, many respondents showed less belief in isiXhosa being used as LoLT, and many respondents showed a strong desire to see isiXhosa being incorporated into their HUB module. The small number of respondents who were against isiXhosa, even after intervention, also supports this. Moreover, the fact that few respondents chose to be indifferent even after intervention also shows that many respondents have the desire to see isiXhosa incorporated as a supplementary language in their field.

5.1.3 Presentation of the readiness for action component

The third component of attitude is readiness for action. This component looks at what plan of action or what position one is ready to take concerning the attitude object. The remaining seven

statements found in the questionnaire were focusing on this component. These statements evaluated the stance of the participants about isiXhosa. This means what actions would the respondents be willing to take given certain situations. Below is the list of questions that looked to evaluate the readiness for action component.

14. If I had a child who wanted to take the HUB 228 module, I would not want isiXhosa to be used as one of the languages for providing lecture materials or for teaching the child
18. If I had a choice between a class that was taught only in English and another that was taught in both isiXhosa and English, I would attend only the English class.
19. I am prepared to experiment with the idea of being taught and receiving lecture materials in my HUB 228 module in isiXhosa.
20. I would be willing to contribute to the development of lecture materials in isiXhosa in my HUB 228 module in isiXhosa.
21. If I had to improve my knowledge of isiXhosa, so as to be able to better understand lecture materials in isiXhosa, I would be willing to learn isiXhosa better.
22. If isiXhosa were used as one of the languages for teaching and learning in my department, I would be willing to be a tutor conducting tutorials for students who have isiXhosa as home language.
23. I am prepared to receive examination questions in both isiXhosa and English even if I have to answer in English.

The overall results showed no improvement in this component of attitude post-intervention. The table below shows the readiness for action results:

TABLE 5. 9: READINESS FOR ACTION SCORES

Readiness for action Component							
Statement No	Pre-test N=35		Post-test N=24		Diff between pre and post % (post-pre)	Pre-test	Post-test
	pro-IsiXhosa respondents %	Against isiXhosa respondents%	pro-IsiXhosa respondents %	Against isiXhosa respondents%		N=35	N=24
14.	77,1	14,3	50	29,8	-27,1	8,6	20,8
18.	80	5,7	70,8	12,5	-9,2	14,3	16,7
19.	94,3	2,8	79,2	12,5	-15,1	2,9	8,3
20.	80	17,1	79,2	12,5	-0,8	2,9	8,3
21.	91,2	5,9	79,2	8,3	-12	2,9	12,5
22.	82,9	2,8	66,7	8,3	-16,2	14,3	25
23.	100	0	83,3	0,8	-16,7	0	12,5

Table 5.9 shows the statements that dealt with the readiness for action component of attitude. Seven statements in the questionnaire represented this component. In the post-intervention, the scores show that not a single statement showed any improvement of attitude when compared to the pre-intervention scores. An explication of these results is in the same way displayed through a breakdown of results according to the three dimensions, pro-isiXhosa, against isiXhosa, and indifferent, in the tables that follow. Each view is also looked at separately.

(i) Pro-isiXhosa: Readiness for action

The table below shows that many respondents were ready to take action in order to ensure that the isiXhosa language can be effectively used in university. This is seen through the number of respondents who were pro-isiXhosa before and after intervention, as shown below.

TABLE 5. 10: SHOWS THE SCORES OF RESPONDENTS WHO WERE PRO-ISIXHOSA.

Statement No	% pro-IsiXhosa respondents (Pre-test) N=35	pro-IsiXhosa respondents (Post-test) % N=24	Diff between pre and post % (post-pre)
14.	77,1	50	-27,1
18.	80	70,8	-9,2
19.	94,3	79,2	-15,1
20.	80	79,2	-0,8
21.	91,2	79,2	-12
22.	82,9	66,7	-16,2
23.	100	83,3	-16,7
Average	86,5	72,6	

An interesting observation to begin with is the high percentage of respondents who were pro-isiXhosa on both pre- and post-test results seen in Table 5.10. Most of the scores, with the exception of statement-14, were above the 66 per cent margin post-test. Consequently, it is clear that the respondents who were pro-isiXhosa prior to intervention were much more than post-intervention. In fact, the average for the pre-test scores is 86.5 per cent while it is 72.6 per cent for post-test scores. Pre-test scores ranged between 77.1 per cent and 100 per cent, i.e. 77.1 per cent was the lowest score while 100 per cent is the highest.

There is a negative difference in scores between both the pre- and post-tests, the worst score is -27.1 per cent. This score is seen in statement 14 in table 10 above. In this statement, 77.1 per cent of the respondents were pro-isiXhosa prior intervention while 50 per cent of them were pro-isiXhosa post-intervention. The rest of the scores were below -16.7 per cent. On the other hand, while the worst of the scores was -27 per cent, the smallest difference can be noticed in statement 20 where the difference is -0.8 per cent. In other words, there is no massive difference between pre-and post-intervention score in this component.

While it is apparent that there is a decline in attitudes post-intervention, it is interesting to note that some statements showed a relatively high number of respondents who were pro-isiXhosa. For instance, statement 23, which states: *'I am prepared to receive examination questions in both*

isiXhosa and English even if I have to answer in English', has the highest number of respondents in this component. Prior intervention, 100 per cent of respondents agreed with the statement while 83.3 per cent were pro-isiXhosa post-intervention. This shows that, despite the negative improvements when it comes to the difference between pre- and post-intervention scores, many respondents were willing to ensure the effective use of isiXhosa in their HUB 228 module.

(ii) Against isiXhosa: Readiness for action

Although the number of respondents that were pro-isiXhosa was high, there were respondents who disagreed with the statements on the readiness for action component. This means they were against the effective use of isiXhosa. However, as the table below shows, a very small group of the respondents were against isiXhosa.

TABLE 5. 11: SHOWS THE RESPONDENTS THAT WERE AGAINST ISIXHOSA

Statement No	Respondents Against isiXhosa pre-test N=35	Respondents Against isiXhosa Post-test N=24	diff between pre & post
14.	14,3	29,8	15,5
18.	5,7	12,5	6,8
19.	2,8	12,5	9,7
20.	17,1	12,5	-4,6
21.	5,9	8,3	2,4
22.	2,8	8,3	5,5
23.	0	0,8	0,8
Average	6,9	12,1	

Table 5.11 shows that most of the respondents were not against the action structure of attitude component. In fact, with the exception of statement-14 post-intervention, and statement-20, the scores of respondents who were against isiXhosa are quite low - below 12.6 per cent on both the pre- and post-interventions. The highest percentage is found with statement-14, where the score is 29.8 per cent, and statement-20 per cent with the score of 17.1 per cent.

While it is clear that many respondents were not against isiXhosa, prior intervention, Table 5.11 shows that many respondents were against isiXhosa post-intervention. This meant that more respondents were against isiXhosa post-intervention when compared to the pre-intervention scores. In fact, only one statement (20) showed positive results on responses against isiXhosa in the readiness for action component. This statement states: *'I would be willing to contribute to the development of lecture materials in isiXhosa in my HUB 228 module in isiXhosa'*. Clearly, the respondents were not totally against the statement. This means they possibly may have rather chosen to remain indifferent since they also never showed improvement on the pro-isiXhosa scores, as presented in Table 5.11.

(iii) Indifferent: Readiness for action

As seen in the previously discussed results on other components of attitude, some respondents tend to choose to remain indifferent rather than committing to agree or disagree with a certain statement. This part of results is no different. This means that, although there is a small portion of the respondents who were unsure about their attitude towards isiXhosa, that portion is nevertheless significant enough to show the difference in scores through uncertainty. Below is the table that shows the scores of respondents who were indifferent.

TABLE 5. 12: SHOWING SCORES OF RESPONDENTS WHO WERE INDIFFERENT

Statement No	Indifferent Respondents pre-test %	Indifferent respondents post-test %	diff between post & post
14.	8,6	20,8	12,2
18.	14,3	16,7	2,4
19.	2,9	8,3	5,4
20.	2,9	8,3	5,4
21.	2,9	12,5	9,6
22.	14,3	25	10,7
23.	0	12,5	12,5

Table 5.12 shows the scores of respondents who were indifferent. It is clear that the number of respondents who chose to be indifferent is small on both pre- and post-interventions. In fact, the highest score is 20.8 per cent, which is for statement-14 post-intervention.

In addition to that, the number of respondents who were indifferent prior to the intervention are fewer than the number of respondents who were indifferent post-intervention. This means while the respondents may have seemed less motivated to take action, most of them were not totally dismissive of the idea to take part in programmes that uses isiXhosa as LoLT. Instead, they chose to be indifferent. This is seen from the greater number of respondents who chose to be indifferent post-intervention.

5.2 Section B: Presentation of test marks

This section presents the results of the test obtained by respondents administered as part of the intervention. The test administered to the respondents was based on the HUB 228 module in lecture one from which the isiXhosa material was developed. This section therefore, presents results on scores obtained by respondents. As alluded to in the methodology, chapter 3, the respondents self-selected the version they preferred to write, i.e. the English or the isiXhosa version. Twenty-nine respondents took part in the administration of the test. Of the 29 respondents, 19 opted to write the English version while the remaining ten chose to write the isiXhosa version. This section represents those results.

Ten questions were prepared for the respondents. The questions were organized in one question paper, giving each respondent a fair option. This was done in such a way that both English and isiXhosa could be equivalent in translation. Moreover, the respondents were not restricted to the English version. They were given both the English and isiXhosa versions. In this way, respondents could engage in translanguaging practices, i.e. they could navigate between languages in order to make sense of the questions. Furthermore, unlike situations where one is expected to show an understanding of the subject at hand by writing long answers, the respondents were given multiple-choice questions. This enabled them to choose only the correct answer. The lecturer for HUB 228, who took some questions from previous question papers and

previous test questions, prepared the questions. Scripts were marked and the results were recorded. The test results were compared, i.e. those who answered the English version and those who answered the isiXhosa one.

5.2.1 Presentation of English test results

The first set of results is from the English version. The table below shows the results obtained by the respondents who answered the English version. The top row represents the individual question in the test i.e. Q1, Q2, Q3, etc. The mark of each question is represented by 1 (for the correct answer) or 0 (for the incorrect answer). The first column on the left represents the individual student where ST-X represents the student. For instance, ST1/2/3 etc. represents student 1/2/3 all the way to student 19. Below cell ST19 is the total number of students who answered correctly on each question. The row below that represents the percentage of students who answered the questions correctly. As mentioned before, there were ten questions, the last column therefore shows the total number of questions each student answered correctly. From the table below, it appears that many respondents found difficulty in answering most of the questions correctly, as Table 13 illustrates:

TABLE 5. 13: ENGLISH TEST SCORES

English											
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	TOTAL
ST1	0	1	0	0	0	0	0	0	0	0	1
ST2	0	1	0	0	0	1	1	0	0	0	3
ST3	0	0	0	1	0	1	1	1	0	0	4
ST4	0	0	0	0	1	1	0	1	0	1	4
ST5	0	0	0	0	1	1	1	0	1	1	5
ST6	0	0	1	0	1	1	1	0	0	1	5
ST7	0	0	0	1	1	1	1	1	0	0	5
ST8	0	1	1	0	0	1	1	1	1	0	6
ST9	0	1	1	1	0	1	1	0	0	1	6
ST10	1	1	1	0	0	1	1	1	0	0	6
ST11	1	0	0	1	1	1	1	1	1	1	8

ST12	0	1	0	0	0	1	1	0	0	0	3
ST13	0	0	0	0	1	1	1	1	0	0	4
ST14	1	1	1	0	1	1	1	1	0	0	7
ST15	0	0	1	0	1	1	1	1	1	1	7
ST16	1	1	0	1	1	1	1	1	1	1	9
ST17	0	0	1	1	1	1	0	0	0	0	4
ST18	1	1	1	1	1	1	1	1	1	1	10
ST19	0	0	1	0	1	1	0	0	0	0	0
TOTAL	5	9	9	7	12	18	15	11	6	8	
%	26,3	47,4	47,4	36,8	63,2	94,7	78,9	57,9	31,6	42,1	

Table 5.13 shows the marks obtained by each participant on each question. It shows that in question one, 26.3 per cent (5/19) of respondents answered the question correctly, while question two as well as question three show 47.4 per cent (9/19) for each of the two questions. On the other hand, question four shows that 36.8 per cent (7/19) of the respondents answered the question correctly, while question five shows a much more improved 63.2 per cent (12/19) result. A staggering 94.7 per cent (18/19) of respondents answering question 6 is the apex of the marks, followed by a 78.9 per cent (15/19) of respondents answering question seven correctly. While a 57.9 per cent (11/19) of respondents answered question eight correctly, only 31.6 per cent (6/19) answered question nine correctly. This leaves 42.1 per cent (8/19) of respondents answering question ten correctly. This means the respondents answered more than 50 per cent of the questions correctly. The other six questions, the respondents found difficult, attaining below 50 per cent.

5.2.2 Presentation of isiXhosa results

Let us now look at how those who answered the isiXhosa version performed. The table below, which is the representation of isiXhosa version scores, is arranged the same way as that of English version. This table shows different results to that of the English version. In fact, it shows that although there were fewer respondents who chose to answer the isiXhosa version, they

found less difficulty in answering many of the questions correctly as compared to those who answered the English version.

TABLE 5. 14: ISiXHOSA TEST SCORES

IsiXhosa											
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	TOTAL
ST1	0	1	1	0	0	1	1	1	0	1	6
ST2	0	1	1	0	1	1	1	0	1	1	7
ST3	1	1	1	0	1	1	1	0	0	1	7
ST4	1	1	1	0	1	1	0	1	0	1	7
ST5	0	1	1	0	1	1	1	1	1	1	8
ST6	1	1	1	0	1	1	1	1	0	1	8
ST7	1	1	1	0	1	1	1	0	1	1	8
ST8	0	1	1	0	1	1	1	1	1	1	8
ST9	1	1	1	1	1	1	1	1	1	1	10
ST10	1	1	1	1	1	1	1	1	1	1	10
TOTAL	6	10	10	2	9	10	9	7	6	10	
%	60	100	100	20	90	100	90	70	60	100	

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While 19 respondents chose to answer the English version, Figure 5.14 shows that ten respondents opted to answer the isiXhosa version. On the isiXhosa version, question one has 60 per cent of respondents who answered correctly, while questions two and three both have 100 per cent (10/10) respondents who answered both questions correctly. Question four had the least number of respondents, 20 per cent (2/10) who answered correctly, while question five had a massive 90 per cent (9/10). In addition to that, 100 per cent (10/10) of respondents answered question six correctly, whereas 90 per cent (9/10) answered question seven correctly. The 70 per cent (7/10) who answered question eight correctly was followed by 60 per cent (6/10) who answered the ninth question correctly. This left another 100 per cent (10/10) of respondents answering question ten correctly. This means nine times out of ten, or 90 per cent of the time, the respondents answered more than 50 per cent of the questions correctly.

5.2.3 Comparison of results

At first glance, those who answered the isiXhosa version seemed to have performed better than those who answered the English version. Although fewer respondents answered in isiXhosa (N=10) compared to English (N=19), it is interesting that the difference in terms of marks is prominent. The best way to view the results was to look at the total number of respondents who answered each question correctly on both versions. In addition to that, the total marks obtained by each respondent on both versions were looked at. Below is the picture painted by the summary of results in the tables found above.

5.2.3.1 Total number of respondents who answered correctly

The first comparison of results is with regards to the number of respondents who had answered each question correctly. The table below shows clearly that the respondents who answered the isiXhosa version had a higher percentage of respondents who answered most questions correctly.

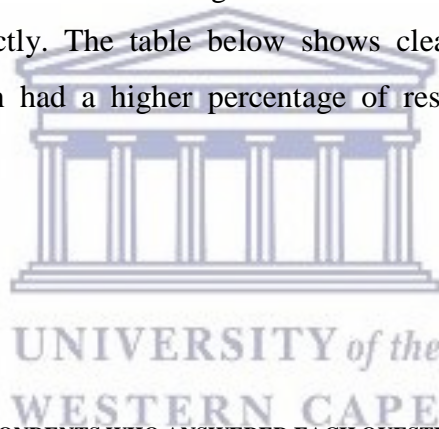
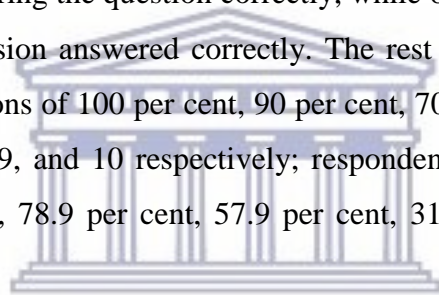


TABLE 5. 15: A SUMMARY OF RESPONDENTS WHO ANSWERED EACH QUESTION CORRECTLY IN BOTH ENGLISH AND ISIXHOSA VERSION

English										
Questions	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
TOTAL	5	9	9	7	12	18	15	11	6	8
%	26,3	47,4	47,4	36,8	63,2	94,7	78,9	57,9	31,6	42,1
Range	26.3 to 94.7									
IsiXhosa										
Questions	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
TOTAL	6	10	10	2	9	10	9	7	6	10
%	60	100	100	20	90	100	90	70	60	100
Range	20 to 100									

Table 5.15 shows a major difference in the number of respondents who answered each question correctly on both the isiXhosa and English versions. For instance, in question one, 26.3 per cent of respondents from the English version answered correctly while 60 per cent of the respondents who answered the isiXhosa version on the same question managed to answer correctly. Both questions two and three show that none of the respondents who answered the isiXhosa version answered incorrectly while in the English version, only 47.4 per cent respondents managed to answer both questions correctly. However, question four displayed different results. For instance, only 20 per cent of the respondents who answered the isiXhosa version managed to answer correctly, while in the English version, only 36.8 per cent answered correctly. Question five shows the majority of respondents who answered the isiXhosa version, with 90 per cent of them answering the question correctly, while 63.2 per cent of the respondents who answered the English version answered correctly. The rest of the table displays the same domination on the same questions of 100 per cent, 90 per cent, 70 per cent, 60 per cent, and 100 per cent on questions 6, 7, 8, 9, and 10 respectively; respondents who answered the isiXhosa version obtained 94,7 per cent, 78.9 per cent, 57.9 per cent, 31.6 per cent, and 42.1 per cent respectively.



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5.2.3.2 Total marks obtained

When looking at the total marks attained, a considerable difference between the respondents who answered the English version and those who answered the isiXhosa one is also observed. For instance, the respondents who answered the isiXhosa version were still dominant when compared to those who answered the English version. To explicate the difference in scores, I found it useful to draw a marks table in order to display how much the difference is. The table below displays a summary of the marks attained from (1-10) by both groups.

TABLE 5. 16: A SUMMARY OF RESULTS ON BOTH ENGLISH AND ISiXHOSA TEST SCORES

English										
Scores obtained	1	2	3	4	5	6	7	8	9	10
No of stud	1	0	3	4	3	3	2	1	1	1
%	5,3	0,0	15,8	21,1	15,8	15,8	10,5	5,3	5,3	5,3
Range	1 to 10									
English										
Marks obtained	1	2	3	4	5	6	7	8	9	10
No of stud	0	0	0	0	0	1	3	4	0	2
%	0	0	0	0	0	10	30	40	0	20
Range	6 to 10									

Table 5.16 presents the number of respondents who attained a certain level of marks on both the English and the isiXhosa versions. A significant difference between the marks attained by the respondents on both versions can be observed. For instance, the respondents who obtained 1/10 to 5/10 are found in the English version, while in the isiXhosa version, none of the respondents obtained marks below 6/10. This means, the English version has respondents' lowest mark of one out of ten (1/10), while in the isiXhosa version, the lowest mark is six out of ten (6/10). More interestingly is that, in the English version, 11 out of 19 (11/19) respondents obtained scores of five and lower, while none of those who answered the isiXhosa version obtained below six. This means 57.7 per cent of respondents who answered in English attained scores below six against the 0 per cent of those who answered the isiXhosa version attaining marks below 6. This can also be interpreted as 10/10 (100 per cent) respondents who answered the isiXhosa version and attained scores above five, compared to only 8/19 (43.3 per cent) of those who answered the English version.

Furthermore, while there are some respondents who answered the English version and managed to get eight and more correct answers, they are still half the number of respondents who

answered the isiXhosa version. This means that 3/19 respondents in the English version managed to score eight and more against the 6/10 in the isiXhosa version.

This comes against the eminent negative attitudes towards isiXhosa even after the intervention was brought, as discussed in the previous chapter. These marks show that, there is, to an extent, an advantage to those who answered in isiXhosa compared to the rest who answered the English version.

This means, most probably, those respondents who navigated between both languages, obtained more marks than those who only answered the English version without navigating between languages. Even when looking at the percentage number of questions answered correctly between both groups, i.e. those who answered the English version and those who answered the isiXhosa version, it is clear that those who answered the isiXhosa version still had a higher number (in terms of percentage) than those who answered the English version.



5.3 Qualitative data

This section deals with the qualitative data presentation of this study. Respondents were given the learning material in isiXhosa in order to 1) help understand the topic in the lecture on HUB 228; 2) a test that evaluated their understanding of the lecture from which the materials were developed; and 3) questionnaires that evaluated their attitudes. The respondents were therefore asked to reflect on such datasets. This was in the form of focus group discussions. Focus group discussions, which were conducted in isiXhosa, consisted of a total of twelve respondents. Two sessions were conducted. The first session consisted of five respondents and the second session consisted of seven respondents. The main reason for having two groups was that in the first group, the members who participated in the test as part of the intervention, answered the English version. It was therefore important to get the respondents who also answered the isiXhosa version of the test. The aim of the focus group discussion was not to compare the responses of both groups, but rather to capture the views of respondents with regards to their respective attitudes towards the provision of material, and the views that might have arisen regarding the issue surrounding the use of isiXhosa in higher education. The interviews were analysed

according to the particular discursive themes that emerged from these discussion, and were then translated.

In the focus group discussions, some themes emerged. These themes are discussed below. One of the themes that emerged concerned the relevance of learning materials and the effects of using isiXhosa.

5.3.1 The relevance of learning material in isiXhosa and the effects of using isiXhosa

This was an important theme to emerge from the data, as it captured some of the respondents' views on how they perceived the provision of learning materials in isiXhosa. I found a number of conflicting viewpoints on this issue. On the positive side, there were students who were clearly in favour of it. For instance, some respondents commented that:

S1: "I never saw it as a waste of time at all. I saw it helpful... I saw it as a right thing"

S2: "But to be honest, when it comes to me, shame, it helped me. For example, when I read, it is written in isiXhosa in that video, right?..."

S3: "It made me truly realise that no, have you wondered how you get to study something and realise that you understand it in your head? However, you realise that no man once you understand it in your own language, it makes sense and stays in your heart and also stays in your mind because you will remember it this time instead of cramming these sentences. So, it becomes real when it is translated into your own language."

However, there were also negative attitudes towards the learning material, with students being quick to point out particular barriers to their understanding of the isiXhosa material. Some of the respondents were captured saying:

S1: "I was going to say, the isiXhosa you used there was very deep (complicated). We are so used to the 'nje' (Translated as simple) isiXhosa==="

S2: *“Many people do not...do not know some human parts, or maybe cows whatever it may be, the parts (anatomy) in isiXhosa. That is part of the problem.”*

Many of the respondents were on the horns of a dilemma, because they seemed undecided. They saw the introduction of isiXhosa learning materials as difficult to comprehend, but at the same time saw the positives that came with it, as a result, they ended up on the fence, as some of the following comments illustrate:

S1: *“...when you came and introduced this, explaining that you wanted to do this and that and that in the beginning, I saw that no it is impossible because there are terms in HUB that are difficult. I thought that even if you were to translate into isiXhosa, you will not be able to understand...like...ok I wanted...ok... but I realised that it is going to help me when I study this for my own understanding. Ok this thing, sometimes you are able to put something in isiXhosa when you are writing on your own, obviously you are going to write it in English...”*

S2: *“It depends to each person, like you see, we suffer as people, so that means when you listen to isiXhosa or read in isiXhosa you understand it better than me whereas for me when I read in English I understand it better. It differs because we as people have different background.”*

S3: *“I also discover that this is interesting because I do not need to translate because even this English, you see...but then this is my language even though I find difficulty in some terms but it becomes better because I can understand the sentence when you say it, when you explain it but get stuck here and there in some areas, you see. It is useful when you are an isiXhosa speaker. You tend to understand it better and still hope that it does not get to be too deep, you see, because there are people who get confused, things like that, who do not understand isiXhosa that well. However, this does not mean that I am saying no, this and that, because this was very useful.”*

Students also cited their lack of proficiency in isiXhosa itself, despite the fact that isiXhosa was their home language:

S1: *“...because to me isiXhosa is very difficult, you see...my proficiency in isiXhosa is weak, you understand? So, that makes it difficult when I listen to your recording.”*

S2 *“...there are some of us who are isiXhosa speakers who do not know isiXhosa very well, you see?..”*

Clearly, there were conflicting views shared by the students on the provision of materials in isiXhosa. In some cases, the provision created doubts on its efficiency and in other cases, it was seen as a barrier to knowledge access. Ultimately, this speaks to the quality of the material provided and, most importantly, the isiXhosa learning materials ultimately caused the students to doubt whether or not they were proficient enough in their own mother-tongue.

5.3.2 Determinants of choosing English or isiXhosa

Since the respondents were given a test to evaluate their understanding of lecture one, it seems like some of them did not even attempt to look at the isiXhosa version. Determinants of choosing English or isiXhosa as a theme emerged because the theme helped to shed some light on some of the concerns that students had that prohibited them from navigating between both the languages, and those reasons that prompted them to answer the isiXhosa version. Many of the respondents complained about ‘time’ as the prohibiting factor to navigate between both languages. Some of the comments are captured below:

S1: *“Wow! Because we were in so much hurry, and I do not want to lie to you, you came at the wrong time that day because we were all rushing to go to write another test.”*

S2: *“Yes, another thing is that it was already late for us because we needed to go and write.”*

One may be inclined to think that the time referred to concerned other duties the students had to execute, however, one student associated the time with navigating through the language itself, saying:

“IsiXhosa is time consuming. One sentence can be equivalent to a paragraph.”

However, the most prominent factor that seemed to dominate in the interviews was the perceived difficulty of isiXhosa, the language that was used in the translation of learning materials:

S1: *“Terminology is the issue.”*

S2: *“...this person’s isiXhosa is very deep. Incum (pericardium),... I tend to think, no... I discover that I am getting lost now.”*

S3: *“There are challenges when we are trying to understand HUB in English. However, isiXhosa, no, it has its own challenges.”*

S4: *“I think the only issue with me was the big words... So, for me that was the only issue, otherwise...”*

Although some students found difficulty in understanding the isiXhosa material, they were still keen on working with material that was in isiXhosa, for affective reasons. This is observed in these comments:

S1: *Eh... I can say I did not just simply choose to write in isiXhosa. There were instances where I was going to the English side because I still did not know some terms in isiXhosa even though I did look at the video===]*

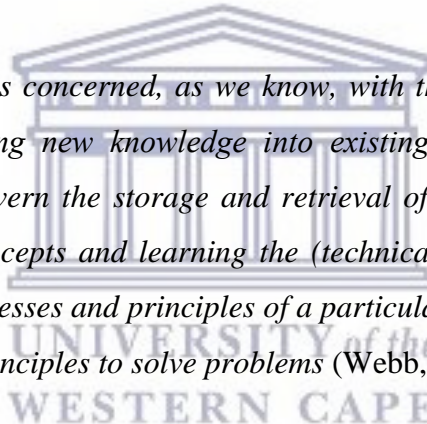
S2: *“===Yes, we were not used to them. But because we wanted to use isiXhosa, I decided that I am going to answer in our own isiXhosa...even though some terms I===”*

S3: *“We are proud of our language.”*

Many students found the learning materials difficult to understand due to the variety of isiXhosa used in the translated material. This is a point that will be discussed in chapter six (analysis and discussion of findings). However, it was interesting to find that some students, despite the difficulty in understanding the isiXhosa material, chose to work with the isiXhosa text for affective reasons.

5.3.3 Existing issues regarding their struggles with English

Vic Webb postulates that:



“Educational development is concerned, as we know, with the acquisition of knowledge (“content”), with integrating new knowledge into existing bases of knowledge, with acquiring the rules that govern the storage and retrieval of information, with grasping scientific and scholarly concepts and learning the (technical) terms for these concepts, with understanding the processes and principles of a particular field of learning, and with using these concepts and principles to solve problems (Webb, 2002:52).

This means, such retrieval of information or grasping scientific and scholarly concepts, or even learning the technical terms, will not be possible if one is not proficient in the language of instruction. This translates to the generally accepted fact that language is a fundamental factor in educational development. This means that, if a student is poorer in his/her proficiency in the language, the poorer his/her performance will be. It has been indicated in chapter 2 of this study that many universities have opted for English as MOI (see Neethling, 2010, Mutasa, 2015, *et al.*). Similar strands have been noticed at the University of the Western Cape where this study was conducted. This means English is the constant gatekeeper in the lives of the students who have battled with this language. As a result of such battles, the students continue to struggle with an understanding of disciplinary concepts such as those in HUB:

S1: *“...when you work at the hospital, and be in contact with an isiXhosa-speaking patient, it becomes difficult to explain what the disease is and what is to be done.”*

S2: *“This HUB is very difficult.”*

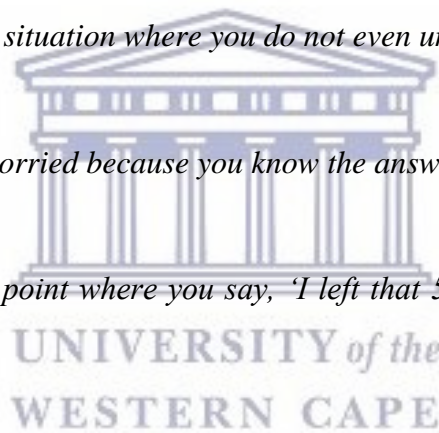
S3: *“There are challenges when we are trying to understand HUB in English.”*

The struggle in conceptual understanding translates into a lack of comprehension when faced with exams and tests, because some students simply never completely grasp what a concept means. This can be demonstrated by these comments:

S1: *“Have you experience a situation where you do not even understand what is being asked===”*

S2: *“=== then you get so worried because you know the answer but did not understand what was asked===”*

S3: *“===You will get to a point where you say, ‘I left that 5 marks’ because you don’t understand the question.”*



or this reason, the majority of students rely on cramming and rote learning as their main strategy in preparing for exams, as these examples below demonstrate:

S1: *“You cram, and cram even the word ‘is’ and come up with the total (test marks) or sometimes after all that (cramming) you forget one word and ultimately everything.”*

S2: *“...Others study it during the time they are going to write just to pass it and they pass it a lot too because if HUB is going to be written now, they do what is known as cramming.”*

5.3.4 Conditions for using isiXhosa

While language policies seem to advocate for the augmentation of African languages and to be used where ‘applicable’, students as well suggested some conditions where African languages could be used. One of their suggestions had to do with the stage in which one can be exposed to, for instance, isiXhosa learning materials. According to the students, if they could have been exposed to isiXhosa learning materials earlier in their lives, this would prevent the challenges that they faced during the test:

S1: *“...if we were to take it to perhaps to the standard 4 level where even when you read a novel, you encounter words referred to as ‘bombastic’ words, which you encounter for the first time, there was a dictionary which helped you understand. If being taught this in isiXhosa starting in the lower levels, and have dictionaries in isiXhosa so that when a person encounters that difficult word, he/she can use the isiXhosa dictionary. But when one continues with this, it will eventually become easy just like this English because the English itself, one learnt it gradually, he/she did not just speak it out of the blue.”*

S1: *“That is why it becomes a challenge because this translation has come at a later stage when we are much older, and everything is in English. So, isiXhosa has been left at the back behind, and there is no way that we can turn back to fetch it...”*

S3: *“I have this part, if... if this started from like here at the university, if it started maybe from first year maybe, maybe there would be a significant change because now HUB i...is more like deeper in second year more than in first year. So, if like if we were to get accustomed to it during first year at the beginning of the year until you finish your degree, I think it could be more effective more than starting now in the middle of our degree like isiXhosa is difficult===”*

However, when students were asked if they saw isiXhosa being used as the sole medium of instruction, they seemed to disagree, seeing it as a ‘problem’:

S1: *“Here is the thing, adapting to another language is challenging...”*

S2: *“Yes, it is going to be a problem now...”*

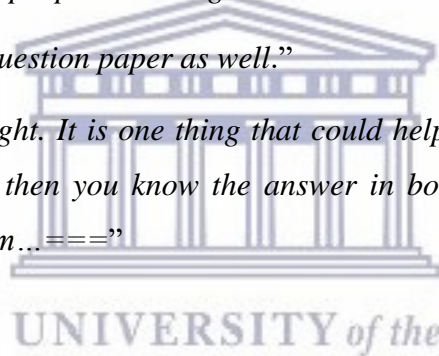
Students preferred to see isiXhosa being used alongside English. This comes from the question whether it would be better for isiXhosa to be used alongside English. Their responses were:

S1: *“Yes, it is much better like that so that you can be able to compare that yes that is ‘incum’ this side and it is ‘pericardium’ that side so you can be familiar with what it talked about especially to people like us who have a problem with isiXhosa.”*

S2: *“It would so much help, brother in the sense that if we can neglect isiXhosa and continue with English, many people including the elders want to continue with English.”*

S3: *“I wish to see this in a question paper as well.”*

S4: *“No, that would be alright. It is one thing that could help, even though even, maybe you answer in English but then you know the answer in both ways. That makes sense more than understanding, em...===”*



These reservations for isiXhosa to be used alongside English prompted me to find out which language would then be chosen if the conditions for using isiXhosa were met, for instance, in assessment conditions like examinations. It seems as if isiXhosa would be the first choice amongst many students if the conditions were met, as these responses show:

S1: *“No, for me, I would choose isiXhosa if you did both in class. No, I would choose isiXhosa.”*

S2: *“No, I would choose isiXhosa.”*

S3: *“I would choose isiXhosa.”*

The challenges students faced arose from the fact that they lacked the conceptual understanding of the isiXhosa terms that were used in the isiXhosa-translated materials. For them, isiXhosa could be used under certain conditions and those conditions would enable them to freely choose isiXhosa even in assessments.

5.3.5 Emerging perceptions of isiXhosa

In De Klerk's (2002) study, the parents (the study's participants) expressed a lack of concern for the decline of isiXhosa usage, expressing their outspoken attitudes towards isiXhosa and their discontent. In fact, some sentiments, among others, were *"It's fine to let it [Xhosa] die. We have never teach [sic] our son any Xhosa, I don't think there will be a need to be a Xhosa-speaker later on"* (De Klerk, 2002:9).

In this particular study, while conducting the interviews, some respondents were observed showing concerns about the position of isiXhosa. Many students were worried that isiXhosa is 'perishing':

S2: *"...it seems as if isiXhosa is getting lost and it is perishing..."*

S2: *"Almost up to 70% of the youth does know their own isiXhosa."*

S3: *"IsiXhosa in our days is perishing. Many people will tell you, what is the need for my children to study isiXhosa if they can speak it with other isiXhosa-speaking people?"*

Most of these concerns saw some students showing emotions while raising their concerns. These emotions were depicted through voice tones and body language where the students were raising their voices, using hand gestures that showed discontent, and facial expressions that depicted partial anger to the idea of not using isiXhosa, since it might become extinct. These students were therefore asked if isiXhosa can still be used as MOI:

S1 “*It can (be used as MOI), I agree with that, it can...why not...WHY NOT? It can. Like we have learnt to speak English, we did not know it, we are not English speaking, we are Xhosas. Do you understand? ... we learned English...then why not learn isiXhosa as well. NO No...no...*”

S2: “*We have MANAGED to learn English, having not known it.*”

5.3.6 Ideological inculcations

Naturally, most of the negative reactions to the translated materials are rooted in particular language ideologies, in particular, the ideology of language hierarchy. Alexander (1999: 11) also puts it that “it is an indisputable fact that in the post-colonial situation, the linguistic hierarchy built into the colonial system led to knowledge of the conquerors’ language becoming a vital component of the ‘cultural capital’ of the neo-colonial elite.” It is the belief that English is the only language suitable for Higher Education, and that isiXhosa belongs at home or for cultural functions (reference). This can be seen in these comments:

S1: “*The way it was given to us, it was always the superior language.*”

S2: “*The problem is that we have been programmed since primary school, that way the problem [to think English is the superior language...]*”

S3: “*We are taught that English is the language. It is all about English. The only way you can communicate with other people...common language*”

S3: “*We did not necessarily grow up knowing English as a superior language. It was just instilled to us as if we were like a horse given blinkers so that it could walk straight. We grew up in such a way as well with regards to English, being the lingua franca as if it is the only language spoken all over the world.*”

To the students, it seems that they are aware that English is there for instrumental purposes and they are also aware that it is meant to be unassailable but also unattainable. From these

sentiments, the students seem to be blaming their socialisation and what it has led them to believe.

5.4. Conclusion

This chapter has presented the results of the three data sets, i.e. the questionnaire, the test as well as the focus group discussion. These results have been presented both qualitatively and quantitatively. What these results mean are discussed in chapter six.



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CHAPTER SIX

ANALYSIS AND DISCUSSION OF THE RESULTS

6.0 Introduction

This study aimed to investigate the attitudes of the students towards the incorporation of isiXhosa learning materials at the University of the Western Cape. This was done by keeping in mind that many scholars have conducted studies which show negative attitudes towards the use of African languages in Higher Education. However, their studies were based on surveys and questionnaires as most researchers, according to Bekker (2002), are perhaps unwilling to adopt other techniques while conducting such a study. For instance, some researchers investigated the preference between English and isiXhosa, by using questionnaires when the subjects may not have been given an informed choice between English and isiXhosa. In other words the students may have never seen the use of isiXhosa in, for example, sciences in real situations like classrooms in higher education. This means that, by [not] tapping into the deeper situations that subjects find themselves in, the [language] choices subjects make may influence [those attitudes]. In other words, the researchers may simply provide a questionnaire that asks which choice the student prefers between 'a' and 'b', when the students have seen what 'a' can provide, but may have not seen what 'b' can provide.

This study, therefore, investigated attitudes towards isiXhosa when the students have been provided with learning materials in isiXhosa. This was done by producing datasets such as isiXhosa learning materials; questionnaires that look at attitudes prior and post-intervention; tests that evaluated the students' understanding of the lecture from which the learning material in isiXhosa was developed; as well as focus group discussions that enabled the students to share their views on attitudes as well as intervention provided. In other words, the study adopted both quantitative and qualitative approaches, as was stated in Chapter Three.

The task of this chapter is to provide a discussion of the data presented in Chapter Five. In doing so, this chapter will recall the theoretical frameworks discussed in Chapter Two that constitute theories on attitudes, language policy as well as terminology development. Moreover, this chapter will follow the structure followed in the previous chapter, which was to look at

different datasets, analyse, and discuss them accordingly. The analysis and discussion was conducted keeping in mind the objectives of the study, which are:

- to explore and describe the disposition of mother-tongue speakers of isiXhosa towards the use of isiXhosa in higher education;
- to investigate the feasibility of using isiXhosa as a resource for academic development and as a medium of instruction;
- to examine the effect of making disciplinary texts in isiXhosa available on the attitude of students towards the incorporation of isiXhosa study materials into their courses;
- to identify the discourses or language ideologies that underpin the attitudes of the students; and
- to reflect on the implications of providing learning materials in African languages on research around language attitudes and work on educational language policies.

6.1 Summary of main findings (quantitative and qualitative combined)

I start this chapter by recalling the findings of the qualitative data and quantitative data seen in the previous chapter (chapter Five) and summarizing them.

6.1.1 The quantitative data

The previous chapter (section 5.2) provided us with the tables that show the results in all three attitudes components prior and post-intervention. Furthermore, the data presentation chapter provides us with the tables that show how the students performed on the administered test as part of the intervention. This section summarizes the results of both datasets, i.e. the questionnaires as well as the test results.

The questionnaires were administered to gain insight into the students' views on the incorporation of isiXhosa in the classroom, particularly in the science field. The introduction of isiXhosa material was the intervention, which was used to see whether the incorporation of isiXhosa material could have any impact on the attitudes of students, and perhaps enhance or

reduce beliefs, affection or behavioural components. The scores obtained in the cognitive component of attitude do not serve as an overview of what the rest of university community at UWC believe concerning the use of isiXhosa, particularly in the sciences.

The results in the pre-test scores show a higher number of participants who believed that the use of isiXhosa in the academic classroom is essential. This is diametrically opposed to the scores obtained on the questionnaire post-intervention on the same statements. Of the twelve statements that represented the cognitive component of attitude, only three of them showed the improvement of attitudes post-intervention. Looking at the results differently, a 69.8 per cent of students, prior intervention, believed that isiXhosa could be incorporated in their HUB 228 module, while post-intervention an average of 51.7 per cent believed in the incorporation of isiXhosa.

Regarding the affective component of attitude, it seems as if, despite the fact that very few statements (S=4) represented this component, many students seem to show more positive attitudes to the idea of incorporating isiXhosa in their module. This is seen in the high percentage of students who would like to see the incorporation of isiXhosa prior and post-intervention. Both the scores were above 90 per cent, with post-intervention scores being the higher of the two (90 per cent and 91.7 percent respectively).

The readiness for action, on the other hand, had seven statements that represented this component of attitude. None of the statements showed any attitude improvement, post-intervention. While this may be a surprising result, it is interesting to see that on both pre-test and post-test results, the number of students who were willing to do whatever is necessary to contribute to the incorporation of isiXhosa in their module was high. This is seen in both pre- and post-test scores, which exceeded the 70 per cent mark.

Also forming part of the qualitative data, was the test that was administered in class. Of the 29 students taking the test, 19 students chose to answer the English version of the test, while the remaining ten students answered the isiXhosa version. From the results (Table 15 in Chapter 5), all ten students who answered the isiXhosa version obtained six marks and above, while 12 of those who answered the English version obtained less than six marks.

6.1.2 Qualitative data

A number of themes emerged from the responses to the interviews and more open-ended questions:

- The relevance of learning material in isiXhosa and the effects of using isiXhosa
- Determinants of choosing English or isiXhosa
- Existing issues regarding their struggles with English
- Conditions for using isiXhosa
- Emerging perceptions of isiXhosa
- Ideological inculcations

At the end of my data analysis, I was left with a few unanswered questions arising from the findings, where the qualitative data was largely used to support the quantitative findings.:

- Why did the results show less improvement in attitudes on the cognitive component?
- Why did the results show improvement on the affective component on post-test compared to the pre-test questionnaires?
- What do the readiness for action results tell us?
- Why did those students who answered the isiXhosa version of the test perform better than those who answered the English version?
- Moreover, a number of contradictions were prominent where students had negative attitudes towards isiXhosa but performed better in the test. In addition, in the questionnaire, some statements revealed negative attitudes but in the focus group discussion, the students seemed not to endorse the use of isiXhosa alone.

In the section below, I provide some the possible explanations for these contradictions and other issues.

6.2 Responses to the above questions arising from findings

In order to answer these questions, while trying to do a thorough analysis, it is important to go through the results, breaking down the attitude into three components as done in chapter 5, pre- and post-intervention, and test scores. This way makes it easy to follow and analyse where the change resulting from the post-test scores may have occurred and also what may have influenced the test marks to be the way they are.

6.2.1 Why did the results show less improvement in attitudes on the cognitive component?

A closer look at the responses on the cognitive component of attitude reveals that in almost all the statements, pre-intervention, more than 70 per cent of respondents believed that isiXhosa could be used as a language of learning and teaching or, at least, be incorporated into the HUB 228 module. The results were surprisingly higher on the pre-test than was expected compared to the post-test results. This was particularly contrary to previous attitude studies results (as seen in chapter 2), which showed that students have negative attitudes towards African languages (see Condua, 2002; Heugh, 2009; Dyers, 1999; etc.). There was an expectation that a higher number of students would be on post-intervention questionnaire results than in the pre-test questionnaire results, when the students had seen and engaged with the isiXhosa learning materials. Instead, only 57.7 per cent of the students believed isiXhosa could be incorporated into the HUB 228 module. More surprising is that, the students were coming from a science field where generally, most students are opposed to the views of using isiXhosa as LOLT isiXhosa (see De Klerk and Dalvit, 2005). According to De Klerk and Dalvit (2005), English is the most preferred language in these areas. In the South African context, English has been poeticized from 1902 as the language with “the finest literature on earth”, and across the globe, it is the “most universally useful of all languages” (Alexander, 2003: 9). Therefore, the higher number of participants who believed that isiXhosa could be used as LOLT in their module, prior intervention, was indeed unexpected.

Moreover, the initial positive attitude towards the incorporation of isiXhosa in the HUB module prior intervention, shows a diametrically opposite view to the study by Heugh (2009), which this study draws from. In Heugh's study, the initial attitudes (pre-test) of the students were negative to the use of isiXhosa in the classroom. This may be because, in Heugh's study, the learners were associating themselves with English prior to the intervention and therefore believed to be proficient in English. In fact, in Heugh's study, the learners insisted that English was their home language and thus could not see themselves in a class that used isiXhosa as MOI. In other words, they did not realise that English could be a language barrier to the understanding of their subject. It was only after the learners were in the English-isiXhosa bilingual classroom that they saw the benefits of using isiXhosa, that they showed improved attitudes in the post-test. Conversely, the students in this study were not comfortable with their English proficiency, at least as a medium of instruction. In fact, English was seen as a barrier to conceptual understanding of the HUB module. Tharpe (1997) also shares the view that inadequate language skills that the learner has in the second language are the retarding factor in understanding subject associated concepts. One of the students commented that:

“...some of us are not Model C's. George (English) is hitting us hard. I am not the only one. There are people who come from locations who are as old as I am doing this HUB module. There are also those who dropped out because of this HUB...”

The fact that, in the interviews conducted, as indicated in chapter 5, most participants saw the difficulty posed by English (being the language barrier), which may have led to such positive attitudes towards the incorporation of isiXhosa in their HUB module. As a result, the students' initial instincts were that the introduction of isiXhosa would be an alternative to their challenge with English. This explains why the students had positive attitudes towards introduction of isiXhosa learning materials prior intervention.

After the intervention however, the students were faced with the reality of using isiXhosa learning materials. They saw the challenges posed by learning materials that were in standard isiXhosa. In fact, in the comments, one of the participants said:

“There are challenges when we are trying to understand HUB in English. However, isiXhosa, no, it has its own challenges.”

Therefore, the fact that isiXhosa was a perceived alternative, but did not provide much anticipated aid, which may have been the reason for a decline in positive attitudes post-intervention and, as a result, a change in beliefs. As much as a change in beliefs can be attributed to a number of factors, most prominent of those factors are the assumptions made about mother-tongue instruction. This is when mother-tongue speakers assume that if a subject is taught in their language, they will automatically understand the terms. These are the sentiments also shared by Paxton (2009), as well as Antia and Dyers (2016). In Paxton’s paper, when the groups were doing a glossary exercise, they assumed a straightforward transition, but when they started to work on creating concepts, they found difficulty in coming up with terms in their own languages. Antia and Dyers argue in their paper, “Unlike known foreign languages... there is... an assumption among powerful role-players that no support initiatives (e.g. academic literacy in students’ home languages) are required” (Antia and Dyers, 2016: 540). Many L1 African language speakers do not anticipate conceptual difficulty when their languages are used as MOI. In this study as well, for most participants, it seems, the encountered problems with the terminology in isiXhosa were not anticipated. They assumed that the supporting material in their mother-tongue would translate to immediate understanding of the module. In fact, one student was observed saying that:

“But for me, I thought it was going to be important because some of the things are not understandable in English but in isiXhosa you are able to understand them...”

The assumption was that isiXhosa was going to be understandable and induce understanding of the material because the students were isiXhosa speakers. However, the terminology used in the isiXhosa learning materials proved quite difficult for them. In fact, it may have led them to think they were better off with English since they already understood some of its terms.

While on the topic of terminology being a significant factor in attitude change, another interesting observation made is that, although the cognitive component may have shown a decline in positive attitudes, it may not necessarily be that the students had been completely apathetic about the use of isiXhosa. Instead, the terminology used may have cast doubt on their beliefs. In other words, the doubts created may have brought about an increase in the number of students who chose to be indifferent after the intervention as compared to the pre-intervention. For instance, out of twelve statements, seven of them showed an increase in the number of students who were indifferent, i.e. those who chose to neither agree nor disagree. I found this particularly interesting because while the tables shows that there was a decline in beliefs into the incorporation of isiXhosa materials, the scores showed that the number of students who were indifferent suggests that there may be conflicting beliefs. For example, statement-11 reads:

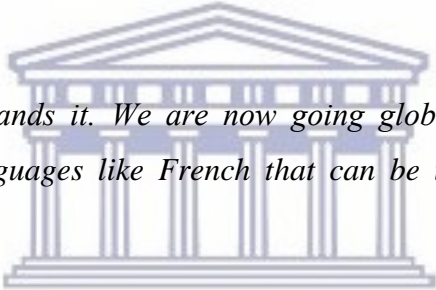
“If isiXhosa were used as one of the languages of teaching and providing lecture materials in my HUB 228 module, I would understand the material better just because I am isiXhosa speaker.”

Indeed, 94.3 per cent agreed with the statement prior to the intervention, while 87.5 per cent agreed with the statement after intervention. This gives a marginal -6.5 per cent difference. While there is subsequently a decline in beliefs, if one notices the 2.9 per cent of students who chose to be indifferent against the 8.3 per cent who chose to be indifferent post-intervention, it is clear that there were mixed feelings about isiXhosa being a language of teaching and providing lecture materials in isiXhosa.

6.2.2 Why did the results show improvement on the affective component?

Students in this study showed negative attitudes towards the incorporation of isiXhosa materials post-intervention with regards to the cognitive components of attitudes. However, on the affective component, they showed a strong desire for the incorporation of isiXhosa in their module. This is seen by the high number of students, with respect to the affective component, who indicated positive feelings towards isiXhosa incorporation in their module. Despite the fact

that only a few statements represented this component, it is interesting to see the range of the students prior and post the incorporation of isiXhosa being between 79.2 per cent and 100 per cent. This means the students would still like to see their mother-tongue being included in the HUB 228 module. In fact, African language speaking students do have a desire to see African languages being used in the education sphere (Antia and Dyers, 2016; 2017). However, the issue has been on the instrumental value of either English (being the language predominantly used in the global world) or an African language (predominantly used locally for cultural functions). The obvious choice has predominantly resided with English since it provides instrumental value. Consequently, the instrumental value of English has resulted in many studies showing negative attitudes towards African languages by speakers of these languages. The study by Condua (2002), for instance, is an example of such. In his study, in the response to a possible introduction of an African language, in particular at Wits, one student was captured saying:



“The corporate world demands it. We are now going global. If other languages are introduced let them be languages like French that can be used to compete out there (S148).”

This does not however, refute or undermine the attitude studies conducted by many prestigious scholars, but the argument basically supports Baker’s view (1992) that sometimes in the study of attitudes, the subjects tend to have those deep-seated feelings that are not overtly expressed. Therefore, one needs to tap into those deep-seated feelings when measuring attitudes. These feelings were observed in students when the idea of the likelihood of isiXhosa perishing was touched on. In fact, strong emotions could be observed in the responses of the students in the focus group interviews (see Chapter Five) on the lack of space afforded to isiXhosa as well as the fear of it ‘perishing’. This could be read in the students’ almost protesting gestures when they were asked if isiXhosa could still be used as MOI. Their responses included the interjection of emotional voices that almost seemed like anger, as one student was captured saying:

It can (be used as MOI), I agree with that, it can...why not...WHY NOT? It can. Like we have learnt to speak English, we did not know it, we are not English speaking, we are Xhosas. Do you understand?... we learned English...then why not learn in isiXhosa as well. NO No...no...

From this passionate response, it is clear that the students still have vested emotions towards the incorporation of the isiXhosa language in the education paradigm. Irrespective of whether the students have an understanding of the learning materials or not, it seems that they would like to see the inclusion of their mother-tongue in higher functions like education.

Furthermore, despite the difficulty posed by the terminology in isiXhosa, it is evident that students were happy to see isiXhosa being incorporated into their module. This is captured in one of the statements in the questionnaire:

“It would make me very happy to see my home language being used to teach HUB 228.”

On both occasions (pre-test and post-test questionnaires), students had very positive attitudes towards the use of isiXhosa. This is seen in the pre-test responses where 97 per cent of the students agreed with the statements, while 100 per cent of responses was observed in the post-test questionnaire. It cannot therefore be a far-fetched postulation that while students recognise the importance of English in the global sphere, they still would like to see their African language in the mix of upward mobility.

6.2.3 What does the readiness for action results tell us?

The readiness for action component was discussed in chapter Two. To refresh the reader's memory, this concept does not necessarily mean '*being ready to act*'. Rather, it probes what one is willing to do in order to ensure a certain outcome (Baker, 1995). Section 5.1.3, in the previous chapter, provided us with results of this attitude component. While the tables show no

improvement in attitudes when we compare the pre-test scores in the questionnaire to the post-test scores, there were a number of interesting observations:

- Firstly, the number of students who were pro-isiXhosa both pre- and post-questionnaires was high, i.e. above 70 per cent;
- Secondly, the number of students against isiXhosa was low; and
- Thirdly, the number of students who remained indifferent was high post-intervention.

In dealing with the first observation, it is noted that, given the pre-test results which showed more students in favour of isiXhosa (86.5 per cent average), there is not much significant difference when compared to the post-test results (72.6 per cent). It must be highlighted though that, given the previous studies (see Heugh, 2009; Hlatshwayo and Siziba, 2013) that have shown negative attitudes towards African languages, it was expected that students would have negative attitudes from the onset, i.e. from the set of questionnaires. However, the students were willing to contribute whatever was necessary to ensure that isiXhosa was used in their module. In other words, the students were willing to invest themselves into the augmentation of isiXhosa, particularly in the sciences, in order to ensure its use. This is also seen from a number of statements in the questionnaire, of which five out of seven post-test responses were above 70 per cent. Amongst those statements is one that states:

“If I had to improve my knowledge of isiXhosa, so as to be able to better understand lecture materials in isiXhosa, I would be willing to learn isiXhosa better.”

Many students were supportive of the statement above in both pre-test and post-test questionnaires. In fact, 91.2 per cent of the students agreed with the statement prior intervention, while a 79.2 per cent agreed with the statement post-intervention. This shows that, although there are challenges with the use of isiXhosa in the classroom, be it the challenging terminology or the variety of isiXhosa used in the learning materials, students are still “willing to learn isiXhosa” for higher functions.

Although the number of students who were pro-isiXhosa prior and post-questionnaire was high (91.2 and 79.2 per cent respectively), it still does not explain why the number of students in the pre-test is higher than in the post-test. In order to explicate on this observation, it is better to view how low or high the responses against isiXhosa in both pre-test and post-test responses were. From the table in the previous chapter (Table 5.11), the number of students against isiXhosa was quite low. The average of the post-test results, which the higher of the two is 12.1 per cent compared to the 6.9 percent. It was expected that more people would be against isiXhosa prior intervention. However, the average shows that the lower number of students were found in the pre-test results. Despite such results, the average number is significantly small to draw much conclusion from it. In fact, similar reasons associated with terminology difficulties found in the cognitive component can explain the high number of students who were pro-isiXhosa and the low number of students who were against isiXhosa. This leads us to the third observation, where the higher number of students who were indifferent is high in post-test results.

It is worth mentioning that, although there is a higher number of students who were indifferent post-intervention, the average on both pre- and post-tests were still low. The pre-test scores showed that an average of 6.6 per cent of students were indifferent about their willingness to contribute to the incorporation of isiXhosa in their module. On the other hand, an average of 14.9 per cent were not sure about their willingness to contribute in order to ensure the use of isiXhosa in their module. It seems as if, while the students were eager to dedicate themselves to ensuring the progress of isiXhosa, after seeing the challenges in the learning materials, they were not sure whether to be part of the solution. However, although this number cannot count as substantial enough to address that view, if you have a lower number of students who are against isiXhosa and more who are indifferent, it means that the students were not completely dismissive of the preparedness to do what is necessary to ensure that isiXhosa is used in their module (readiness for action). Instead, this could be due to other variables, such as how they perceived their proficiency in isiXhosa, or the isiXhosa variety used.

6.2.4 Why did those students who answered the isiXhosa version of the test perform better than those who answered the English version?

The administration of the test was part of the dataset as well as an intervention between the pre- and post-test questionnaires. The test was meant to evaluate whether or not the provision of learning materials in isiXhosa showed any improvement in the conceptual understanding of the module. The students participated in the test, having self-selected their preferred language version from the two versions, i.e. the isiXhosa or the English version. This means the test was given in both English and isiXhosa. This was to ensure that students had an understanding of what is asked in the test by accommodating their language background. In this way, they could look at both the isiXhosa and English questions before answering. This was done in line with Makgamata, Heugh, Prinsloo and Lolita's (2013) views that:

We are convinced that ethically sound and valid assessments of learners should accommodate the language backgrounds of students. We are also of the view that assessments which do not do this, lack validity and do a serious disservice to students (Makgamata, Heugh, Prinsloo and Lolita, 2013: 267)

Therefore, the students were allowed to navigate between both languages as the questions were in one question paper. The process of navigating between the two languages was to enable the students to translanguage (Garcia and Wei, 2014). As Garcia and Wei (2014: 134) also argue, "assessments using a translanguaging mode would enable students to show what they know using their entire linguistic repertoire." This is because, if there were no access to other resources to make meaning of the assessment, the lack of access would lead to failure in producing knowledge. In other words, if one encounters a situation where there is a language barrier, one is more likely to misunderstand what the answer to the question is. Some students also expressed this as a disadvantage, on the absence of other resources that help understand the question, one being that:

S1: Have you experienced a situation where you do not even understand what is being asked===

S2: “===Then you get so worried because you know the answer but did not understand what was asked.”

While it can be argued that, although the provision of material was an attempt to rescue the students who share the same views as these above, there are other factors that may have inhibited students from navigating between the two languages. These factors are discussed below.

It appears that very few students chose to answer the isiXhosa version compared to those who chose the English version. However, those few students who chose the isiXhosa version performed better than those who elected to answer the English version. It can be argued that there were not many students who answered the isiXhosa when compared to those who answered the English version. However, that still does not explain why many of the students, particularly those who answered the isiXhosa version, managed to answer certain questions (four of them - Q=4), ten out of ten, yet only one out nineteen students obtained ten out of ten. In fact, 3 students managed to attain marks between eight to ten in the English version, while six obtained marks between eight to ten. This leaves us with a number of questions regarding the factors that have led to such a difference. Some questions are listed below:

- Did all the students navigate between both languages?
- What were the advantages or disadvantages in navigating between both English and isiXhosa student from the students' standpoint?
- What are the attitudes or ideologies that inform the navigation or lack thereof between the two language versions?

In order to discuss and answer the questions above, it requires that we look at the focus group interviews, as the comments give us insight into the factors involved in going about answering the test.

6.2.4.1 Did all the students navigate between both languages?

Although students were given both the English and isiXhosa versions in order to have the liberty to translanguage, i.e. to navigate between the two languages and make sense of each question, it appears that some students gave themselves a chance to look at only one (English) version. This was quite surprising given the advantages of translanguaging. Garcia and Wei (2014: 67) argue that translanguaging “creates the possibility that bilingual students could use their full linguistic and semiotic repertoire to make meaning.” In this case, the students would be able to navigate between both versions (English and isiXhosa) to make sense of the questions. As an advantage, the students would have been able to understand what answers the questions were looking for. When asked whether they looked at the isiXhosa version, one of the student expressed this:

S1: *“Wow! Because we were in so much hurry, and I do not want to lie to you, you came at the wrong time that day because we were all rushing to go to write another test = = =”*

Clearly, the students, or at least some of them who answered the English version, did not consult the isiXhosa version. The lack of consultation of the isiXhosa version is explained as due to time constraints (also highlighted under limitations in chapter 3). We understand that tertiary level has its own demands across different fields, as do the Nursing Department which, amongst others, is the requirement for a student to conduct field work by being at the hospital or clinic twice a week as student nurses. In addition to that, they are also required to attend classes, write tests, hand in assignments, etc. on different modules when not in the field. Clearly, time therefore is seen as a contributing factor that has led many students to jump to the English version, as it was the first version in the question paper, isiXhosa being on the other side of the question paper. This resulted in a lack of navigation between the two versions.

On the other hand, although there were concerns with time constraints, students who answered the isiXhosa version admitted to having navigated between both languages:

“Eh... I can say I did not just simply choose to write in isiXhosa. There were instances where I was going to the English side because I still did not know some terms in isiXhosa even though I did look at the video===”

From the comment above, it is clear that some students navigated between the two languages. As a result, the students who answered the isiXhosa version scored higher marks than the students who answered the English version. One needs to be careful though not to generalise and attribute the better performance by the students to the aid provided by the isiXhosa learning materials, as other factors such as preparedness, etc. could have influenced the results. However, unwillingness to navigate between languages can account for the reason those who only used the English version performed poorer than the students who answered the isiXhosa version. Perhaps, looking at the advantages or disadvantages expressed by students on navigating between languages can give us insight.

6.2.4.2 What were the advantages in navigating and disadvantages in not navigating between the English and isiXhosa versions from the students' standpoint?

Although this section deals with the test results, to answer this question requires that we look at the discursive themes which emerged from the focus group discussions. In particular, the theme that can help answer this question is, what the determinants were for choosing the English or isiXhosa version. One of the subthemes mentioned in Chapter Five under this theme had to do with time. Although time was mentioned in the previous paragraph, time constraints were associated with academic duties. It is interesting to see that the time mentioned here is associated with isiXhosa being time-consuming. This can be seen as a disadvantage, as mentioned in this comment:

“IsiXhosa is time consuming. One sentence can be equivalent to a paragraph.”

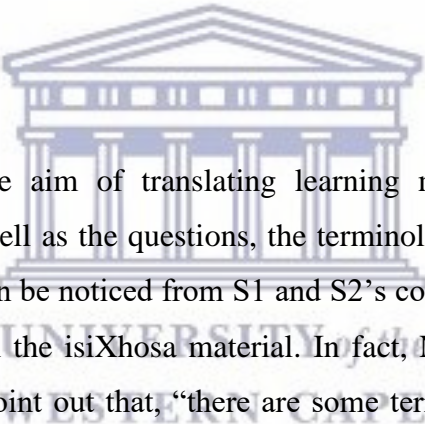
Although this sentiment on isiXhosa where one sentence could be a paragraph may have been exaggerated, there may be some truth to it. This is because some terms in isiXhosa are an

explanation (in a sentence) rather than one word, sentiments shared by Paxton (2009). According to this student whose comment is stated above, navigating between two languages is potentially time-consuming, a luxury students have expressed they do not have.

Another disadvantage is associated with the terminology used. This is where students argued that the variety used in the learning materials was too difficult. This was echoed in comments such as:

S1: *“there are terms in HUB, you see, in HUB big terms that we do not know their meaning in isiXhosa. For instance, the term, iNCUM (mediastinum). We did not know...and...and...”*

S2: *“Then when it comes to ULWAMBESI (pericardium), you do not know what it refers to...”*



It is clear that although the aim of translating learning materials was to enhance the understanding of the terms as well as the questions, the terminology used might have put some students at a disadvantage, as can be noticed from S1 and S2's comments above. These concerns may have led to a disinterest in the isiXhosa material. In fact, Nomlomo and Mbekwa (2013: 142) concur with this as they point out that, “there are some terms which when translated into isiXhosa, become unfamiliar to everyday isiXhosa language use.” The terminology used for this study may have impeded some students' understanding of the lecture, resulting in an unwillingness to engage with the isiXhosa version. Thus, some students felt that there was no need to consult the isiXhosa version since the terms used were considered to be difficult.

On the other hand, some students saw the advantages in the isiXhosa learning materials. This can be seen in one of the comments made by one participant:

“Some of us grew up in rural areas. Growing up there, we already knew some the terminology used in your translation because they are spoken in rural areas and they can be very useful in science...”

The comment made above by this particular student may best explain why those who answered the isiXhosa version did better than those who answered the English version. The student highlights his / her linguistic background, which proved to be an advantage when they answered the isiXhosa version. To explicate this further, the student used the phrase, ‘already knew’. This suggests an advantage that the student had even while encountering the isiXhosa learning materials. This is because as ‘*already*’ suggests, while some participants (as alluded to in the previous chapter) may have found the terminology used in the isiXhosa learning material difficult, there were some students who did not encounter much of that problem at all. This is because some of the terms may have already existed in their linguistic background and thus explains why those who answered the isiXhosa version obtained more marks than the students who answered the English version.

6.2.4.3 What are the attitudes or ideologies that inform the navigation or lack thereof between the two language versions?

While the aim of translating the questions was an attempt to bridge the gap between knowledge consumption and linguistic impediments, especially towards isiXhosa speaking students, the terminology used can, in some cases, inhibit thorough understanding of the content. This is likely to cultivate negative attitudes towards such a language. It needs to be borne in mind that the anticipation of the students was that isiXhosa was supposed to be the language that was going to liberate them (students) from content difficulties and from Eurocentric captivity associated with the English language as it is used as a MOI. The fact that isiXhosa did not bring relief to the arrested development of module understanding is likely to cause distress to those who believed that isiXhosa learning materials were the solution. As a result, negative attitudes towards isiXhosa learning materials are likely to manifest.

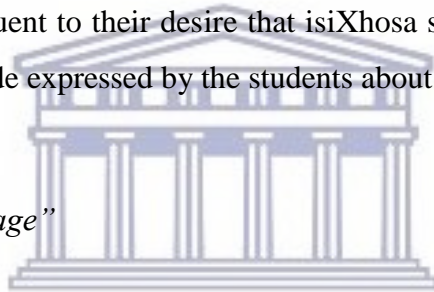
This comes from the fact that some of the students admitted to having been programmed to see English as the only language for upward mobility. One of the students was even recorded as saying:

“We are taught that English is the language. It is all about English. The only way you can communicate with other people...common language”

These inculcated ideologies are not in isolation to the UWC students. They have been seen manifesting in other students’ comments, such as in Condua’s (2002) study on Wits students towards the possible introduction of an African language. This is where any use of a language other than English in a formal multilingual setting might be seen as creating factions, which the proponents of English are trying to sow (Condua 2002). Condua (2002) argues that, due to the diversity in the university (Wits), the use of English is unifying the diverse groups and therefore the introduction of any African language could paradoxically result in racial and ethnic divisions.

However, some students seemed to appreciate the effort of translating the material to isiXhosa, because it was congruent to their desire that isiXhosa should be used in their module. In fact, there was a sense of pride expressed by the students about isiXhosa:

“we are proud of our language”



Pride in the isiXhosa language was the reason some of the students chose the isiXhosa version. What was interesting was that these students acknowledged that they were not used to the isiXhosa text:

“===Yes, we were not used to them. But because we wanted to use isiXhosa, I decided that I am going to answer in our own isiXhosa...even though some terms I=== (was still not used to them)”

From the comment, it is evident that for affective reasons, irrespective of the fact that the students were not used to the terms in isiXhosa, they were willing to find out for themselves what answering the isiXhosa version would be like. Despite the fact that some students were concerned with isiXhosa being time-consuming, these students disregarded that and challenged

themselves by answering the isiXhosa version. In fact, these are the students who admitted to having navigated between both languages. Ultimately, pride in their language made some students navigate between the two languages in the test.

6.3 Paradoxes or contradictions

A number of contradictions were prominent in the results where a) in the questionnaire, some statements revealed negative attitudes, but in the focus group discussion, they wanted a blend of isiXhosa and English; and b) students had negative attitudes towards isiXhosa post-intervention but performed better in the test.

Before discussing these issues, it is important to acknowledge that questionnaires do not necessarily reveal everything the respondent wishes to express. Sometimes in a questionnaire, respondents pick the best choice available to them because of limited options. In some cases, respondents may choose to be in line with what they think the researcher wants to know without revealing their true feelings about the phenomenon. Without sounding repudiating, I should acknowledge that it is true that students revealed negative attitudes towards isiXhosa post-intervention. However, the first thing we need to discover is how the students saw or perceived the learning materials. From some students' comments, it is clear that some students hailed the provision of isiXhosa learning materials. In fact, one student shared this:

S2: "No, to be honest, when it comes to me, shame, it helped me. For example, when I read, as it is written in isiXhosa in that video, right?"

The comment above indicates the recognition of the importance of isiXhosa learning materials by the student. In fact, such sentiments are not alien to attitude studies. These sentiments are also found in many other studies where there is a provision of learning materials other than English (Nomlomo and Mbekwa, 2013; Antia and Dyers, 2016; etc.). In Antia and Dyers' (2016) study, they argued that the students appreciated the multimodal approach to the incorporation of languages other than English, which served to foster epistemological access. In this study, some students acknowledged that the provision of isiXhosa learning materials helped

them in fostering understanding of the module, instead of employing rote learning or cramming when it came to exams, as one student commented that:

“It made me truly realize that no...have you wondered how you get to study something and realize that you understand it in your head. But you realize that no man once you understand it in your own language, it makes sense and stays in your heart and also stays in your mind because you will remember it this time instead of cramming these sentences. So, it becomes real when it is translated into your own language.”

The provision of material was not only there to enhance students’ understanding of the module, but also to help eliminate the ‘cramming’ practices, which are studying strategies adopted by the students in many situations during the time of exams.

On the other hand, some students seemed to have conflicting views on the provision of isiXhosa learning materials. These students acknowledged that isiXhosa would aid them in understanding their modules, but later realised that it was not easy to understand the terms used in isiXhosa learning materials. This led to the issue where students had negative attitudes in the questionnaire but still wanted to see isiXhosa alongside English.

a) In the questionnaire, some statements revealed negative attitudes, post-intervention, but in the focus group discussion, the students seemed to endorse the use of isiXhosa alongside English.

One fundamental explanation for this statement seems to lie primarily with the language variety used in the isiXhosa learning materials. The ‘isiXhosa’ that was anticipated was a different variety from what the students received. This is seen in the following comment:

“The only issue with me was the big words but then it was helpful but there were those big terms in isiXhosa that made me see that I have to also find out from the book (isiXhosa dictionary) in order to understand.”

Clearly, the isiXhosa variety that was expected by the students was different to the variety used in the learning materials. This can be associated with the point made earlier on about the misconceptions that the provision of learning materials would lead the students to understand their work and everything will be easier just because they are isiXhosa speakers. The fact that the students discovered that the isiXhosa materials were not easy to grasp instilled doubts in students. The reader can recall that the students showed vested emotions towards isiXhosa, as can be seen on the affective component of attitude results. Furthermore, students have seen how effective the translated material could be. Therefore, it is not only about the usefulness of isiXhosa but also about whether they could cope with the difficult terminology. This could be why the ideal solution for the students was that isiXhosa should be alongside English. This way the students could get the best of both worlds. However, the students still understood that the isiXhosa variety used was too much for them to understand, hence they brought about conditions in which the isiXhosa learning materials could work best:

“...if you could try and make it clear. I do not know Cape Town isiXhosa that is going to be accommodative to people in this environment, do you understand?”

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The condition the students suggested was that the variety used should at least be the urban variety which students could understand.

b) Students had negative attitudes towards isiXhosa post-intervention but performed better in the test.

Very interesting contradictions emerged when it was noted that some students expressed negative attitudes towards isiXhosa, yet these same students performed better in the test when they made use of the isiXhosa translations. In many studies (cf. Dyers, 1999; Heugh, 2009; etc.), students showed reluctance towards being associated with African languages, seeing the association as degrading. In fact, in such studies, students chose to identify themselves with English rather than an African language. For instance, in Heugh's (2009) study, many students

were observed repudiating isiXhosa, claiming not to know isiXhosa. However, they were later seen migrating to the X-E class a few weeks later. In this study, it may happen that the difficulty posed by isiXhosa terms reminded them of how deep they are in the slide towards unilingualism, dominated by English. In fact, there were signs of defeat observed from the students, as they viewed that it was too late for isiXhosa to reach the level that English has, and there is no use trying to use it (isiXhosa) anymore. Some comments expressed depict this defeat, as one student expressed that:

“...this translation has come at a later stage when we are much older, and everything is in English. So, isiXhosa has been left at the back behind, and there is no way that we can turn back to fetch it.”

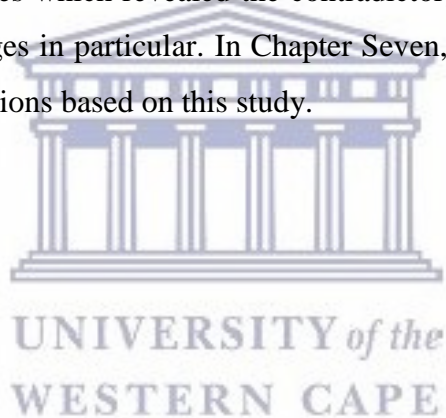
The student's view shows that the negative responses in the questionnaire can be as a result of isiXhosa's position. The comment above “...and there is no way that we can turn back to fetch it...” also shows that the student does not believe that there can be anything done to revive isiXhosa. These sentiments above are similar to the comments that were expressed in De Klerk's (2002) paper, where parents whom the study was based on, expressed that isiXhosa can die out as their children no longer need it, they were English first language speakers. However, some of those parents were doing the little they could in trying to ensure that their children speak isiXhosa even if it was only through cultural activities.

However, it is not new that people overtly express negative attitudes towards a certain phenomenon but later associate themselves with it. Dyers (1999:79) writes that such contradictions emanate from what she describes as differences between openly expressed language preferences and the more deep-seated, private language attitudes. Language preferences have a direct relationship with language behaviour, while attitudes are different from, and not always congruent with, language behaviour. Therefore, expressing a negative attitude may have little to do with how people use the language towards which such attitudes are expressed – people may still make use of this language for a range of reasons. In South Africa, for example, it is common to hear many black people speak very negatively about Afrikaans – in

*fluent*Afrikaans! And they appear blissfully unaware of the contradictions in their attitudes and actual language behaviour.

6.4 Conclusion

This chapter offered an analysis of the findings presented in Chapter Five. It started off with a brief summary of the findings and then analysed both the quantitative and qualitative data, which was found to have largely supported the quantitative findings. A number of unanswered questions also had to be addressed, such as the contradictions between student attitudes and their actual language practices and performance on especially the test provided. This was shown to be in line with other attitude studies which revealed the contradictory nature of these beliefs about languages, and African languages in particular. In Chapter Seven, which concludes this thesis, I offer a number of recommendations based on this study.



CHAPTER SEVEN

CONCLUSIONS AND RECOMMENDATIONS

7.0 Introduction

In this chapter, I provide an overview of the study and the summary of the basic research findings. This is followed by a brief discussion of the recommendations arising from this study. I then proceed to reflect on the shortcomings as well as irregularities in the research study, for which I suggest possible reasons. In addition, I look at the relevance of this study for developments in the field of language attitudes in South Africa generally, but more specifically, language attitudes towards African languages in higher education. Furthermore, this chapter discusses developments in terminology, as well as the implications for language policy in Higher Education, particularly at the University of the Western Cape. I conclude the chapter by pointing the way forward towards further research.

The purpose of the study was to evaluate the attitudes of the students towards isiXhosa at the University of the Western Cape. The aim was to provide students with both isiXhosa and English learning materials in order to evaluate their attitudes when they have been provided with valid options in order to make informed choices. Furthermore, the study looked to evaluate whether the isiXhosa learning materials had any impact on their attitudes, or at least in enhancing students' understanding of the HUB 228 module. This way, the study could look at the implications for language policy in Higher Education, particularly at the University of the Western Cape.

The objectives of this study were:

- to explore and describe the disposition of mother tongue speakers of isiXhosa towards the use of isiXhosa in higher education;
- to investigate the feasibility of using isiXhosa as a resource for academic development and as a medium of instruction;
- to examine the effect of incorporating isiXhosa study materials into their courses, by gauging students' attitudes towards African languages;

- to identify the discourses or language ideologies that underpin the attitudes of the students; and
- to reflect on the implications of providing learning materials in African languages on research around language attitudes and work on educational language policies.

7.1 Summary of Findings

The findings reveal that nursing students at the University of the Western Cape had positive attitudes towards the incorporation of learning materials in isiXhosa prior to my intervention. Post-intervention, the same students had negative attitudes towards the incorporation of isiXhosa in their module. These results can be attributed to a number of factors, such as the influence of English, since it is the prestigious language. However, the fundamental factor that seemed to influence the attitudes of the students was the difficulty in the terminology used in the isiXhosa learning materials. This is where most students had concerns that the variety used in the material in isiXhosa was too difficult for them to understand. The students had hoped that the isiXhosa learning materials would help them understand the module better, but due to the fact that its terms were impeding on their understanding, their attitudes changed from being positive to negative (see chapter 6).

As alluded to in the previous chapter (Chapter Six), the students had hoped that the variety used in the isiXhosa learning materials would be the urban variety rather than the ‘deep isiXhosa’. Makoni (2010, citing from Calteaux, 1996; Cook, 2009; Makoni, Brutt-Griffler, & Mashiri, 2007; Mungai, 2008) argues that in sub-Saharan Africa, the majority of the population use urban vernaculars or hybrid varieties, and these varieties are indeed ‘the’ mother tongue of most school-going children. In this study, students saw the difficulty of the isiXhosa terminology in the learning materials, as has been discussed under advantages and disadvantages in Chapter six (section 6.3.4). This led to a change in the students’ attitudes, since students found the isiXhosa terms ‘difficult’. In other words, the fact that the terms were seen as difficult led to the negative attitude towards isiXhosa terms as has been seen in the cognitive results.

However, other findings still showed that students would like to see the use of isiXhosa in their module. This was seen in the high number of students on both the pre-test and post-test

results (above 79 per cent) who showed the desire to see isiXhosa being incorporated in their module on the affective component of attitude.

Even so, students suggested some conditions where isiXhosa would be effective in their module. One of the conditions highlighted was that isiXhosa should be used alongside English. The advantages of this were highlighted in one of the student's comments that:

“Yes, it is much better like that so that you can be able to compare that yes that is ‘incum’ this side and it is ‘pericardium’ that side so you can be familiar with what it talked about especially to people like us who have a problem with isiXhosa.”

This condition cannot be taken lightly, when one takes into consideration that English is already far developed compared to African languages, especially in the field of science as far as terminology is concerned. In addition to that, this suggestion is congruent with the aim of the study, which is not to replace English with isiXhosa, but to have isiXhosa used alongside English in order to supplement knowledge when English alone fails to do so. Furthermore, the students suggested that the stage at which isiXhosa could be introduced is at first year level: *“You can't give me material in isiXhosa at this stage and expect me to be positive towards isiXhosa”*.

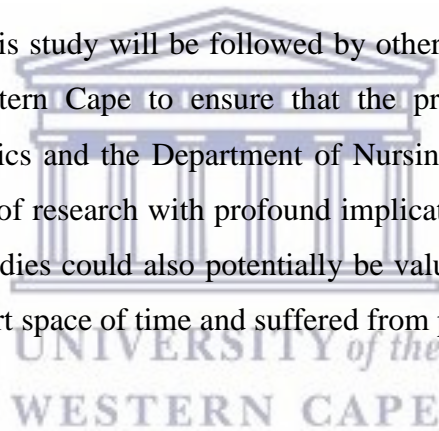
Regarding the test, the results showed that those who answered the isiXhosa version performed better than those who answered the English version. Although not conclusively, the students who navigated between English and isiXhosa performed better than those students who answered the English version without navigating between the two languages.

7.2 Recommendations

Based on the findings of my study, I would like to recommend the following:

- Translation of lectures and other study material must take account of students' translanguaging practices, which students seem to employ not just in informal settings in their daily lives, but in formal settings as well.

- Lecturers and tutors need to acquaint themselves with the translated terminology being used and such terminology must be reviewed regularly. For this purpose, it is important to ensure that more speakers of isiXhosa are appointed both as tutors and lecturers.
- Decisions must be taken on the appropriate variety of isiXhosa to use. Clearly, using ‘deep’ isiXhosa does not resonate well with most students and therefore the translations need to reflect the ways in which they actually use the language.
- It is desirable that students be introduced to translated materials right at the beginning of their academic studies, so that they become used to the isiXhosa learning and assessment materials as they progress through their studies.
- Those tasked with the implementation of language policies at universities should be given the appropriate powers to ensure that policies become practices, so that languages other than English can start to flourish in academia.
- It is to be hoped that this study will be followed by others in different disciplines at the University of the Western Cape to ensure that the practices already visible in the Department of Linguistics and the Department of Nursing spread across the university. This is a very rich area of research with profound implications for teaching and learning. Longitudinal impact studies could also potentially be valuable, given that this particular study was done in a short space of time and suffered from particular limitations.



7.3 Conclusion

This study presented and analysed attitudes of students towards isiXhosa within the context of the Human Biology module, HUB 228, offered in the Department of Nursing at UWC. This study aimed to see whether negative attitudes could be changed if students were provided with isiXhosa learning materials in the sciences. The language attitudes were analysed based on the three components of attitudes (Baker, 2002). The three theories, language attitudes, language policy, and terminology development, were the pillars which this study was based on. The study further looked at the implications of language policy, drawing in particular on the University of the Western Cape Language Policy (UWCLP, 2002), which draws on the Language Policy for Higher Education (2002). The final pillar, which is the terminology development, draws from the

work of Sager (1990) as well as Antia (2002). This study evaluated the attitudes of students who have been provided with multilingual learning materials, and it further looked at the implications of the study for language policy.

This chapter has provided the summary of the findings of this study as well as a number of recommendations. The terms created in this study will be collected, reviewed and possibly used further in future studies on terminology development.



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APPENDICES

APPENDIX I

TERM DEFINITIONS

TERMS	DESCRIPTIONS	SOURCE
Heart	A hollow muscular organ of vertebrate animals that by its rhythmic contraction acts as a force pump maintaining the circulation of the blood	www.merriam-webster.com/dictionary/heart
Mediastinum	The space in the chest between the pleural sacs of the lungs that contains all the tissues and organs of the chest except the lungs and pleurae	https://www.merriam-webster.com/dictionary/mediastinum
Thorax	The part of the mammalian body between the neck and the abdomen; also :its cavity in which the heart and lungs lie	www.merriam-webster.com/dictionary/thorax
Oesophagus/Esophagus	Esophagus, also spelled oesophagus, relatively straight muscular tube through which food passes from the pharynx to the stomach. The esophagus can contract or expand to allow for the passage of food.	https://www.britannica.com/science/esophagus
Trachea	The main trunk of the system of tubes by which air passes to and from the lungs that is about four inches (10 centimeters) long and somewhat less than an inch (2.5 centimeters) in diameter, extends down the front of the neck from the larynx, divides in two to form the bronchi, has walls of fibrous and muscular tissue stiffened by incomplete cartilaginous rings which keep it from collapsing, and is lined with mucous membrane whose epithelium is composed of columnar ciliated mucus-secreting cells — called also windpipe	https://www.merriam-webster.com/dictionary/trachea#medicalDictionary
Thymus	A glandular structure of largely lymphoid tissue that functions especially in cell-mediated immunity by being the site where T cells develop, is present in the young of most vertebrates typically in the upper anterior chest or at the base of the neck, and gradually decreases in size and activity after puberty	https://www.merriam-webster.com/dictionary/thymus
Vagus nerve	Either of the 10th pair of cranial nerves that arise	https://www.me

	from the medulla oblongata and supply chiefly the viscera especially with autonomic sensory and motor fibres	riam-webster.com/dictionary/vagus
Phrenic Nerve	A general motor and sensory nerve on each side of the body that arises chiefly from the fourth cervical nerve, passes down through the thorax to the diaphragm, and supplies or gives off branches supplying especially the pericardium, pleura, and diaphragm — called also <i>phrenic</i>	https://www.merriam-webster.com/medical/phrenic%20nerve
Diaphragm	A body partition of muscle and connective tissue; specifically :the partition separating the chest and abdominal cavities in mammals	www.merriam-webster.com/dictionary/diaphragm
Sternum	A compound ventral bone or cartilage of most vertebrates other than fishes that connects the ribs or the shoulder girdle or both and in humans consists of the manubrium, gladiolus, and xiphoid process — called also <i>breastbone</i>	www.merriam-webster.com/dictionary/sternum
Pericardium	The conical sac of serous membrane that encloses the heart and the roots of the great blood vessels of vertebrate	www.merriam-webster.com/dictionary/pericardium
Pericarditis	Inflammation of the pericardium	www.merriam-webster.com/dictionary/pericarditis
Pneumopericardium	An abnormal state characterized by the presence of gas (as air) in the pericardium	https://www.merriam-webster.com/medical/pneumopericardium
Myocardium	The middle muscular layer of the heart wall	www.merriam-webster.com/dictionary/myocardium
Stethoscope	A medical instrument for detecting sounds produced in the body that are conveyed to the ears of the listener through rubber tubing connected with a	https://www.merriam-

	piece placed upon the area to be examined	webster.com/dictionary/stethoscope#medicalDictionary
Electrode	A conductor used to establish electrical contact with a non-metallic part of a circuit	https://www.merriam-webster.com/dictionary/electrode#medicalDictionary
Electrocardiogram	The tracing made by an electrocardiograph; also :the procedure for producing an electrocardiogram	www.merriam-webster.com/dictionary/electrocardiogram#medicalDictionary
Vein	Blood vessel; especially :any of the tubular branching vessels that carry blood from the capillaries toward the heart	www.merriam-webster.com/dictionary/vein
Artery	Any of the tubular branching muscular- and elastic-walled vessels that carry blood from the heart through the body	www.merriam-webster.com/dictionary/artery
Aorta	The great arterial trunk that carries blood from the heart to be distributed by branch arteries through the body	www.merriam-webster.com/dictionary/aorta
Capillaries	Resembling a hair especially in slender elongated form	www.merriam-webster.com/dictionary/capillaries
Atherosclerosis	An arteriosclerosis characterized by atheromatous deposits in and fibrosis of the inner layer of the arteries	https://www.merriam-webster.com/dictionary/atherosclerosis#medicalDictionary
Clot	A coagulated mass produced by clotting of blood	www.merriam-

		webster.com/dictionary/clot
Thrombus	A clot of blood formed within a blood vessel and remaining attached to its place of origin	https://www.merriam-webster.com/dictionary/thrombus#medicalDictionary
Embolus	An abnormal particle (as an air bubble) circulating in the blood	https://www.merriam-webster.com/dictionary/embolus#medicalDictionary
Spasm	An involuntary and abnormal muscular contraction	www.merriam-webster.com/dictionary/spasm
Plaque	A localized abnormal patch on a body part or surface	www.merriam-webster.com/dictionary/plaque
Lipoprotein	A conjugated protein that is a complex of protein and lipid	www.merriam-webster.com/dictionary/lipoprotein
Catecholamine	Any of various amines (such as epinephrine, norepinephrine, and dopamine) that function as hormones or neurotransmitters or both	https://www.merriam-webster.com/dictionary/catecholamine#medicalDictionary
Nociceptors	A receptor for injurious or painful stimuli :a pain sense organ	https://www.merriam-webster.com/dictionary/nociceptor#medicalDictionary

		onary
Plexus	A network of anastomosing or interlacing blood vessels or nerves	www.merriam-webster.com/dictionary/plexus
Ganglion	A mass of nerve tissue containing cell bodies of neurons external to the brain or spinal	www.merriam-webster.com/dictionary/ganglion
Synapse	The point at which a nervous impulse passes from one neuron to another	www.merriam-webster.com/dictionary/synapse
Vasoconstriction	Narrowing of the lumen of blood vessels	www.merriam-webster.com/dictionary/vasoconstriction
Septum	A dividing wall or membrane especially between bodily spaces or masses of soft tissue	www.merriam-webster.com/dictionary/septum
Valves	A bodily structure (such as the mitral valve) that closes temporarily a passage or orifice or permits movement of fluid in one direction only	www.merriam-webster.com/dictionary/valves
Stenosis	A narrowing or constriction of the diameter of a bodily passage or orifice	www.merriam-webster.com/dictionary/stenosis
Anterior mediastinum	The anterior mediastinum is the portion of the mediastinum anterior to the pericardium and below the thoracic plane.	https://radiopaedia.org/articles/anterior-mediastinum
Superior mediastinum	Part of the mediastinum lying superior to the horizontal plane intersecting the sternal angle and approximately the T4-5 intervertebral disc (that is, above the pericardium)	https://medical-dictionary.thefreedictionary.com/superior+mediastinum
Posterior	Lies between the pericardium anteriorly and the vertebral column posteriorly and below the level of	https://medical-dictionary.thefre

mediastinum	the plane that intersects the sternal angle and the T4-5 intervertebral disc. It contains the descending aorta, thoracic duct, oesophagus, azygos veins, and vagus nerves.	edictionary.com /Posterior+mediastinum
Inferior mediastinum	The region below a horizontal plane transecting approximately the T4-5 intervertebral disc posteriorly and the sternal angle anteriorly, demarcating the inferior limit of the superior mediastinum. It is subdivided into three regions: middle, anterior, and posterior.	https://medical-dictionary.thefreedictionary.com /Inferior+mediastinum
Thoracic cavity	The division of the body cavity that lies above the diaphragm, is bounded peripherally by the wall of the chest, and contains the heart and lungs	https://www.merriam-webster.com/medical/thoracic%20cavity
Pleural cavity	The space that is formed when the two layers of the pleura spread apart — called also pleural space	https://www.merriam-webster.com/medical/pleural%20cavity
Sternal angle	The angle between the manubrium and the body of the sternum at the manubriosternal junction. Marks the level of the second costal cartilage (rib) for counting ribs or intercostal spaces. Denotes level of aortic arch, bifurcation of trachea, and t4/t5 intervertebral disc.	https://medical-dictionary.thefreedictionary.com /sternal+angle
Xyphoid process	The cartilage at the lower end of the sternum.	https://medical-dictionary.thefreedictionary.com /Xyphoid+process
Midsternal line	On the front of the thorax, one of the most important vertical lines is the midsternal line, the middle line of the sternum.	https://encyclopedia.thefreedictionary.com/Midsternal+line
Intercostal space	Is the anatomic space between two ribs (Lat. Costa). Since there are 12 ribs on each side, there are 11 intercostal spaces, each numbered for the rib superior to it.	https://encyclopedia.thefreedictionary.com/Inter

		costal+space
Pericardial effusion	Is an abnormal accumulation of fluid in the pericardial cavity. Because of the limited amount of space in the pericardial cavity, fluid accumulation leads to an increased intrapericardial pressure, which can negatively affect heart function.	https://encyclopedia.thefreedictionary.com/Pericardial+effusion
Cardiac tamponade	Also known as pericardial tamponade is when fluid in the pericardium (the sac around the heart) builds up and results in compression of the heart.	https://encyclopedia.thefreedictionary.com/Cardiac+tamponade
Myocardial infarction	Commonly known as a heart attack, occurs when blood flow decreases or stops to a part of the heart, causing damage to the heart muscle.	https://encyclopedia.thefreedictionary.com/Myocardial+infarction
Fibrous pericardium	The external layer of the pericardium, consisting of dense fibrous tissue.	https://medical-dictionary.thefreedictionary.com/Fibrous+pericardium
Serous pericardium	The inner, serous portion of pericardium, consisting of two layers, visceral and parietal; the space between the layers is the pericardial cavity.	https://medical-dictionary.thefreedictionary.com/Serous+pericardium
Parietal layer	The outer layer of an enveloping sac or bursa, usually lining the walls of the cavity or space occupied by the enveloped structure, the structure itself being covered with the inner or visceral layer of the enveloping sac; an actual or potential space is enclosed by the two continuous layers, intervening between parietal and visceral layers. The parietal layer is usually the more substantial layer.	https://medical-dictionary.thefreedictionary.com/Parietal+layer
Visceral layer	The inner layer of an enveloping sac or bursa that lines the outer surface of the enveloped structure, as opposed to the parietal layer that lines the walls of the occupied space or cavity. The visceral layer is usually thin, delicate, and not apparently separate, but instead seems to be the outer surface of the	https://medical-dictionary.thefreedictionary.com/Visceral+layer

	structure itself. See also: serosa.	
Pericardial cavity	The fluid-filled space between the two layers of the pericardium	https://www.merriam-webster.com/medical/pericardial%20cavity
Pericardial fluid	The serous fluid that fills the pericardial cavity and protects the heart from friction	https://www.merriam-webster.com/medical/pericardial%20fluid
Cardiopulmonary resuscitation	A procedure designed to restore normal breathing after cardiac arrest that includes the clearance of air passages to the lungs, mouth-to-mouth method of artificial respiration, and heart massage by the exertion of pressure on the chest	https://www.merriam-webster.com/dictionary/cardiopulmonary%20resuscitation
Circulatory system -	The system of blood, blood vessels, lymphatics, and heart concerned with the circulation of the blood and lymph	https://www.merriam-webster.com/dictionary/circulatory%20system
Right ventricle	The chamber on the right side of the heart that receives venous blood from the right atrium and pumps it into the pulmonary trunk	https://www.thefreedictionary.com/Right+ventricle
Left ventricle	The chamber on the left side of the heart that receives arterial blood from the left atrium and pumps it into the aorta	https://www.thefreedictionary.com/left+ventricle
Left Atrium	The left upper chamber of the heart that receives blood from the pulmonary veins	https://www.thefreedictionary.com/left+atrium
Right atrium	The right upper chamber of the heart that receives blood from the venae cavae and coronary sinus	https://www.thefreedictionary.c

		om/right+atrium
Coronary sulcus	A groove on the outer surface of the heart marking the division between the atria and the ventricles. Synonym(s): sulcus coronarius [ta], atrioventricular groove, atrioventricular sulcus, auriculoventricular groove, coronary groove	https://medical-dictionary.thefreedictionary.com/Coronary+sulcus
Coronary sinus	A venous channel that is derived from the sinus venosus, is continuous with the largest of the cardiac veins, receives most of the blood from the walls of the heart, and empties into the right atrium	https://www.merriam-webster.com/dictionary/coronary%20sinus#medicalDictionary
Pulmonary trunk	An arterial trunk or either of its two main branches that carry venous blood to the lungs	https://www.merriam-webster.com/dictionary/pulmonary%20artery#medicalDictionary
Coronary arteries	Either of two arteries that arise one from the left and one from the right side of the aorta immediately above the semilunar valves and supply the tissues of the heart itself	https://www.merriam-webster.com/dictionary/coronary%20artery#medicalDictionary
Venae cava	Either of two large veins that drain blood from the upper body and from the lower body and empty into the right atrium of the heart.	https://www.merriam-webster.com/dictionary/vena%20cava#medicalDictionary
Angina pectoris	Acute pain in the chest resulting from myocardial ischemia (decreased blood supply to the heart muscle); the condition has also been called cardiac pain of effort and emotion because the pain is brought on by physical activity or emotional stress that places an added burden on the heart and	https://medical-dictionary.thefreedictionary.com/Angina+pectoris

	increases the need for blood being supplied to the myocardium.	
Anaerobic metabolism	Is the creation of energy through the combustion of carbohydrates in the absence of oxygen.	https://medical-dictionary.thefreedictionary.com/Anaerobic+metabolism
Interventricular	Pertaining to the location between the ventricles, as the septum of the heart. Situated between ventricles	https://www.merriam-webster.com/medical/interventricular
Cardiac nerve	Any of the autonomic nerves traveling to the cardiac plexus. The three main sympathetic nerves (superior cardiac nerve, middle cardiac nerve, and inferior cardiac nerve) originate in the superior, middle, and inferior cervical sympathetic ganglia. The preganglionic parasympathetic innervation of the cardiac plexus is from the vagus nerve.	https://medical-dictionary.thefreedictionary.com/Cardiac+nerve
Cardiac innervation	The parasympathetic nervous system mainly innervates the SA and AV nodes in the heart. Atrial muscle is also innervated by vagal efferents, whereas the ventricular myocardium is only sparsely innervated by vagal efferents.	https://medical-dictionary.thefreedictionary.com/Cardiac+innervation
Sinoatrial node	The mass of specialized cardiac muscle fibers that normally acts as the "pacemaker" of the cardiac conduction system; it lies under the epicardium at the upper end of the sulcus terminalis.	https://medical-dictionary.thefreedictionary.com/Sinoatrial+node
Vagus nerves	The 10th of the 12 pairs of cranial nerves that arise directly from the brain.	https://medical-dictionary.thefreedictionary.com/Vagus+nerves
Preganglionic	Situated proximal to or preceding a ganglion; referring specifically to the preganglionic motor neurons of the autonomic nervous system (located in the spinal cord and brainstem) and the preganglionic, myelinated nerve fibers by which they are connected to the autonomic ganglia.	https://medical-dictionary.thefreedictionary.com/Preganglionic

Ciliary ganglion	A parasympathetic ganglion in the posterior part of the orbit.	https://medical-dictionary.thefreedictionary.com/Ciliary+ganglion
Atrioventricular node	A collection of cardiac fibers at the base of the interatrial septum that transmits the cardiac impulse initiated by the sinoatrial node.	https://medical-dictionary.thefreedictionary.com/Atrioventricular+node
Septal defects	These are holes in the septum, the muscle wall separating the right and left sides of the heart. Atrial septal defects are openings between the two upper heart chambers and ventricular septal defects are openings between the two lower heart chambers.	https://medical-dictionary.thefreedictionary.com/Septal+defects



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APPENDIX II

TERM ORIGIN

Term	Latin origin	Greek origin	French origin	English origin
Heart				English
Mediastinum	Latin			
Anterior mediastinum	Latin			
Superior mediastinum	Latin			
Posterior mediastinum	Latin			
Inferior mediastinum	Latin			
Thorax		Greek		
Thoracic cavity		Greek		
Pleural cavity		Greek		
Esophagus		Greek		
Trachea		Greek		
Thymus		Greek		
Vagus	Latin			
Phrenic	Latin			
Diaphragm		Greek		
Sternum		Greek		
Sternal angle	Latin			
Manutrium of sternum		Greek		
Body of sternum		Greek		
Xyphoid process		Greek		
Midsternal line		Greek		
Intercostal space	Latin			
Pericardium		Greek		
Pericardium				

Pericarditis		Greek		
Pericardial effusion	Latin			
Cardiac tamponade	Latin			
Pneumopericardium		Greek		
Myocardium		Greek		
Myocardial infarction		Greek		
Fibrous Pericardium		Greek		
Serous pericardium		Greek		
Parietal	Latin			
Visceral	Latin			
Cell	Latin			
Tissue	Latin			
Pericardial cavity		Greek		
Pericardial fluid		Greek		
Stethoscope		Greek		
Electrode				English
Electrocardiogram				English
Cardiopulmonary resuscitation	Latin			
Circulatory system -	Latin			
Ventricle (right and left)	Latin			
Atrium (right and left)	Latin			
Coronary sulcus	Latin			
Coronary sinus	Latin			
Vein	Latin			
Artery		Greek		
Pulmonary	Latin			
Trunk	Latin			
Coronary	Latin			
Coronary (arteries)	Latin			
Aorta	Latin			
Venae cava	Latin			
Arc of aorta	Latin			
Capillaries	Latin			
Atherosclerosis	Latin			
Angina pectoris	Latin			
Clot				English

Thrombus		Greek		
Embolus		Greek		
Spasm		Greek		English
Plaque			French	
Lipoprotein			French	English
Catecholamine				English
Anaerobic metabolism				English
Nociceptors	Latin (Noci)			English (ceptor)
Interventricular	Latin			
Cardiac		Greek		
Innervation				English
Autonomic nervous system	Latin (nerve)			English (autonomic)
Plexus	Latin			
Sinoatrial node	Latin			
Vagus nerves	Latin			
Ganglion		Greek		
Preganglionic		Greek		
Post ganglion		Greek		
Ciliary ganglion	Latin (Ciliary)	Greek (ganglion)		
Sympathetic nervous system	Latin (Sympathetic nervous)	Greek (System)		
Parasympathetic nervous system	Latin (Nervous)	Greek (System)		English (Parasympathetic)
Synapse	Latin			
Vasoconstriction	Latin			
Atrioventricular node	Latin			
Septum	Latin			
Septal defects	Latin			
Ventricular septal	Latin			

defects				
Patent ductus arteriosus	Latin			
Valves	Latin			
Stenosis	Latin			
Coarctation	Latin			
Dilation	Latin			



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APPENDIX III

TRANSLATED TERMS

Term	IsiXhosa translation
Heart	Intliziyo
Mediastinum	Umphakathi wencum
Anterior mediastinum	Umpambili wencum
Superior mediastinum	Umntla womphakathi wencum
Posterior mediastinum	Umva womphakathi wencum
Inferior mediastinum	Umzantsi womphakathi wencum
Thorax	Isifuba
Thoracic cavity	Isikhewu sesifuba
Pleural cavity	Inwebu yemiphunga
Esophagus	Umbiza
Trachea	Qhoqhoqho
Thymus	Thayimasi
Vagus	Ivagasi
Phrenic	Ifreniki
Diaphragm	Isiqwanga
Sternum	Incum
Sternal angle	Umvambo wethambo
Manutrium of sternum	Umqheba wethambo le ncum
Body of sternum	Isiqu sethambo lencum
Xyphoid process	Umsila wethambo lencum
Midsternal line	Umgca ophakathi wethambo lesifuba
Intercostal space	Isithuba esiphakathi kwembambo
Pericardium	Ulwambesi

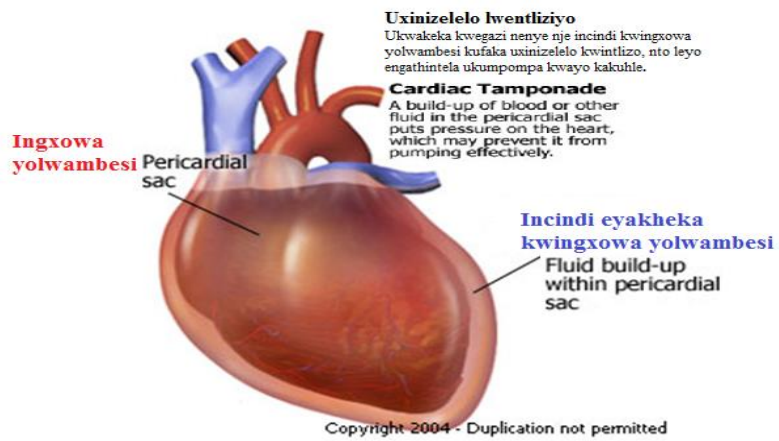
Pericarditis	Isifo sokudumba kolwambesi
Pericardial effusion	Ukuphuphumala kolwambesi
Cardiac tamponade	Uxinizelelo lwentliziyo
Pneumopericardium	Ukuzala komoya kulwambesi
Myocardium	Isihlunu solwambesi
Myocardial infarction	Ukuhlaselwa yintliziyo
Fibrous Pericardium	Ulwambesi oluntsinga
Serous pericardium	Ulwambesi olumanzirha
Parietal	Udonga lwesikhewu
Visceral pericardium	Ingcamba yolwambesi
Pericardial cavity	Isikhewu solwambesi
Pericardial fluid	Incindi yolwambesi
Stethoscope	Isixhobo sokujonga isantya segazi
Electrode	Incam yocingo ekufakwangayo umbane
Electrocardiogram	Isixhobo sokujonga ukubetha kwentliziyo
Cardiopulmonary resuscitation	Umsebenzi wokumpompa intliziyo
Circulatory system -	Isixokelelwano sokujikeleza kwegazi
Ventricle (right and left)	Ilo (lasekunene nelasekhohlo)
Atrium (right and left)	Igumbi eliphezulu lentliziyo (elasekunene nelasekhohlo)
Coronary sulcus	Umsele Wentliziyo
Coronary sinus	Umbhobho osisitishi wentliziyo
Vein	Unobuyisa
Artery	Unothumela
Pulmonary	Unothumela wemiphunga
Trunk	Umboko
Coronary	Malunga nentliziyo
Coronary (arteries)	Oonothumela bentliziyo
Aorta	Umboko kanothumela / umxhelo
Venae cava	Ivenakhava
Arc of aorta	Igophe lomboko kanothumela/lomxhelo

Capillaries	Imibhojana yentliziyo
Atherosclerosis	Atherosiklerosisi
Angina pectoris	Iintlungu zesifuba ezibangelwa kukuhlaselwa yintliziyo
Clot	Ihlwili
Thrombus	Ihlwili elibumbeneyo
Embolus	Ihlili elihamba kwimithambo yegazi
Spasm	Ukurhwaqela kwemithambo / inkantsi
Plaque	Inggokelela yokungcola
Lipoprotein	Lipoprothini
Catecholamine	Khathekholumini
Anaerobic metabolism	Imethabholizimu eswele umongomoya
Nociceptors	Izankeli-ntlungu
Interventricular	Phakathi kwelolo
Cardiac	Malunga nentliziyo
Innervation	Uvuselelo lwemithambo
Autonomic nervous system	Isixokelelwano semithambo-luvo esizimeleyo
Plexus	Ubuxhakaxhaka bentliziyo
Sinoatrial node	i-Eseyi nowudi
Vagus nerves	Imithambo-luvo yevagasi
Ganglion	igangliyani
Preganglionic	Phambi kwegangliyani
Post ganglion	Emva kwegangliyani
Sympathetic nervous system	Isixokelelwano semithambo-luvo sentshukumo
Parasympathetic nervous system	Isixokelelwano semithambo-luvo sokuthomalalisa
Synapse	Ukudibana
Vasoconstriction	Ukucutheka kwesivalo sentliziyo
Atrioventricular node	i-Eyvi nowudi
Septum	Isahluli-yacu
Septal defects	Umonakalo wesahluli-yacu
Ventricular septal defects	Isahluli-yacu selolo esonakeleyo
Patent ductus arteriosus	Umbhobho okusana wokunikela igazi ungavumiyo ukuvaleka
Valves	Izivalo
Stenosis	Ufingano lombhobho
Coarctation	Ufingano lomxhelo
Dilation	Ukhukhumalo
Congenital heart defect	Iziphene zentliziyo ozalwa nazo/ ezenziwa sisifo
Cell	Inggamzana
Tissue	Iyacu

APPENDIX IV

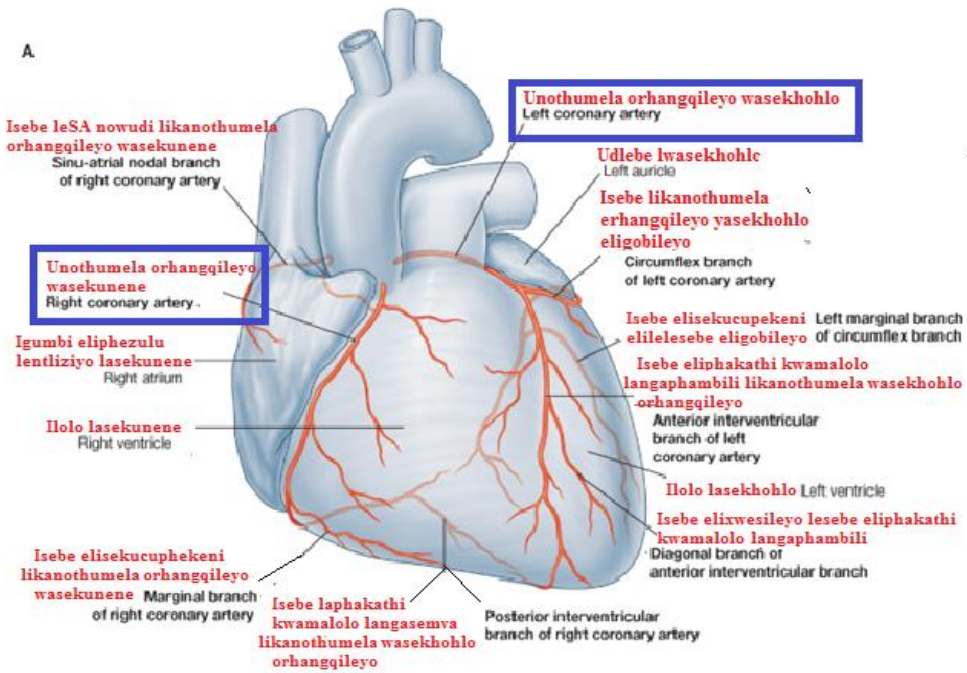
DIAGRAM FIGURES

Diagram showing Cardiac Tamponade

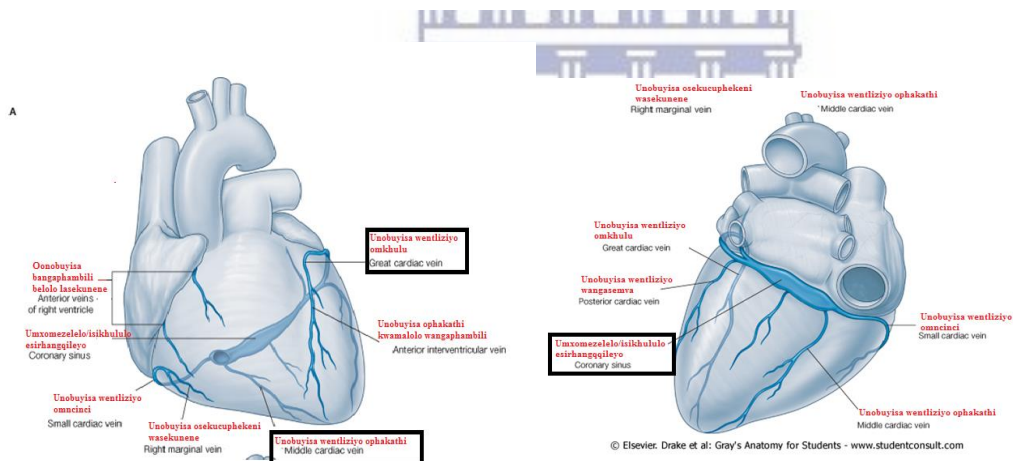


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Diagram showing Coronary circulation



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Diagram showing Intercostal cartilage

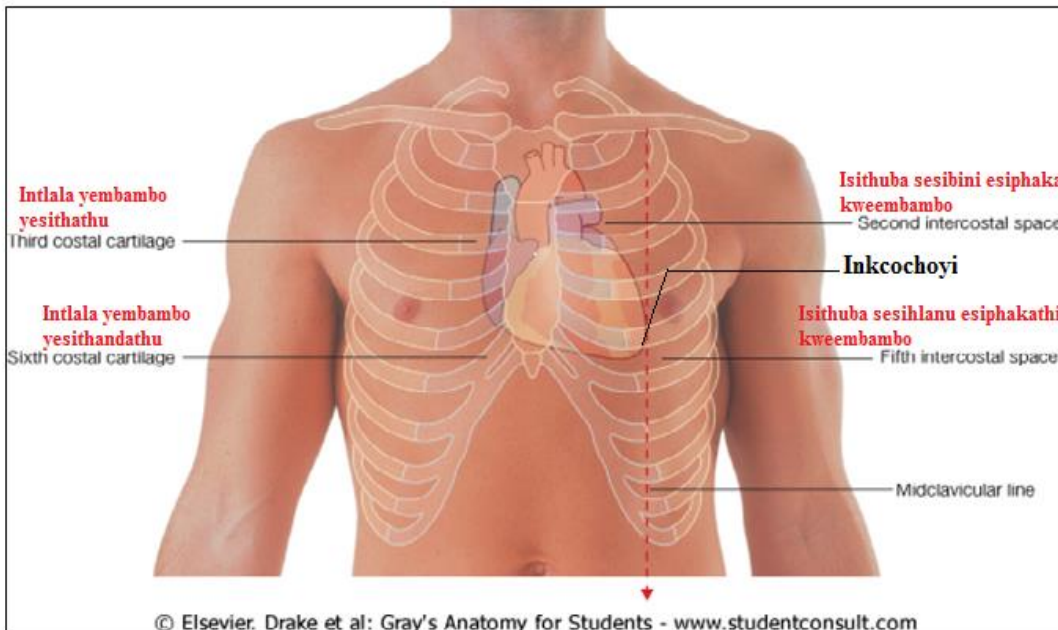
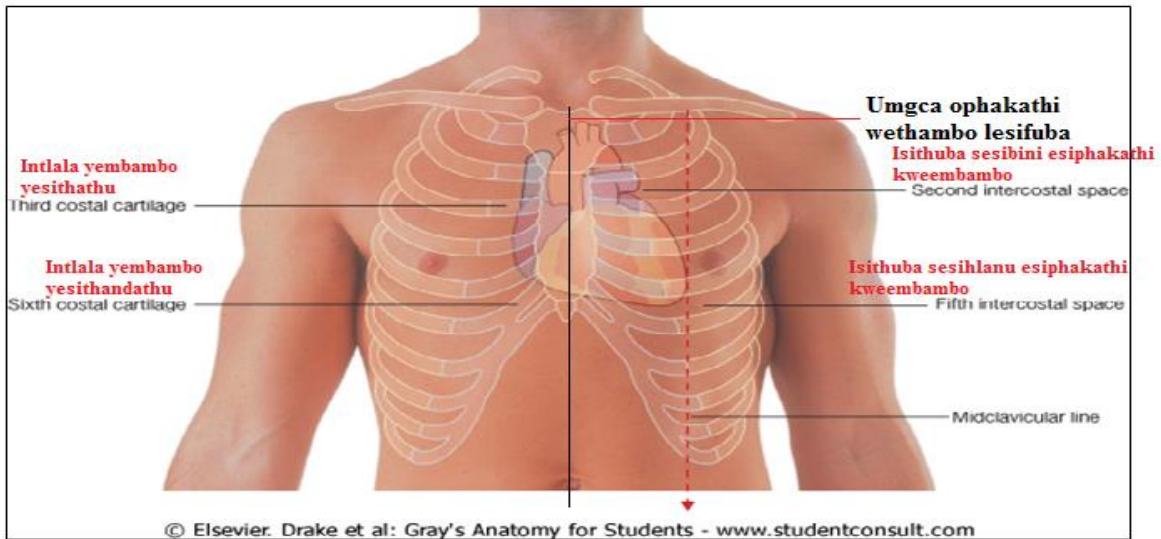


Diagram showing Dilated aortic valve

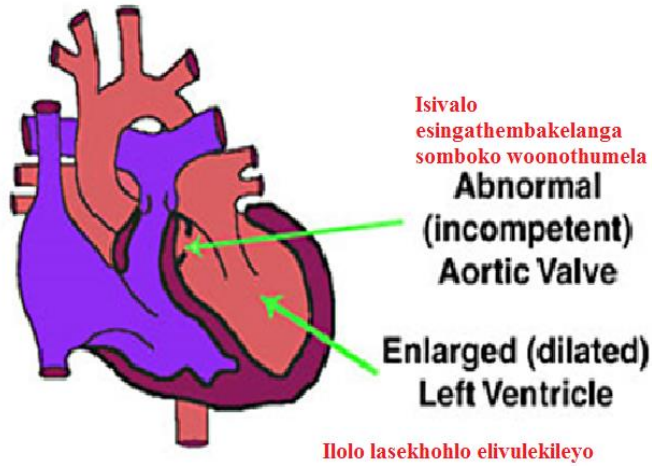
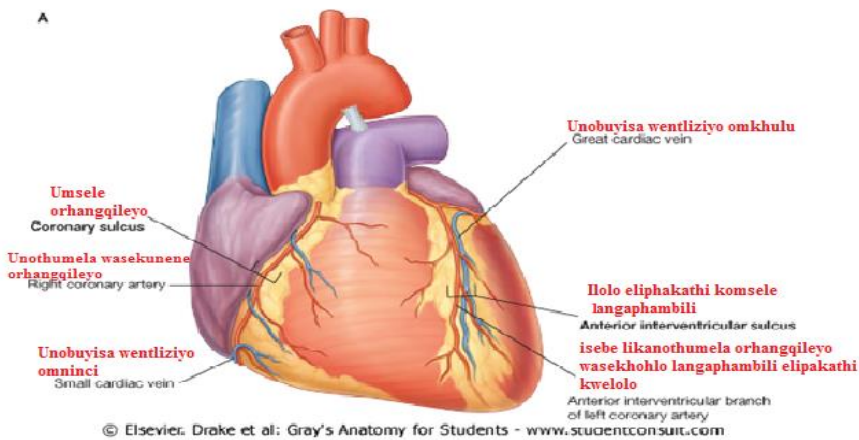
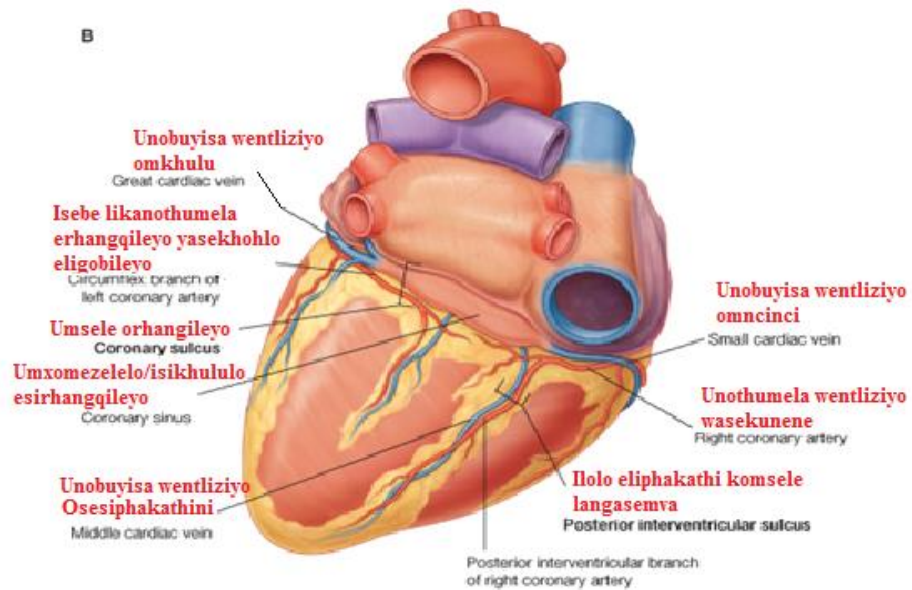


Diagram showing External sulci





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Diagram showing Ganglions

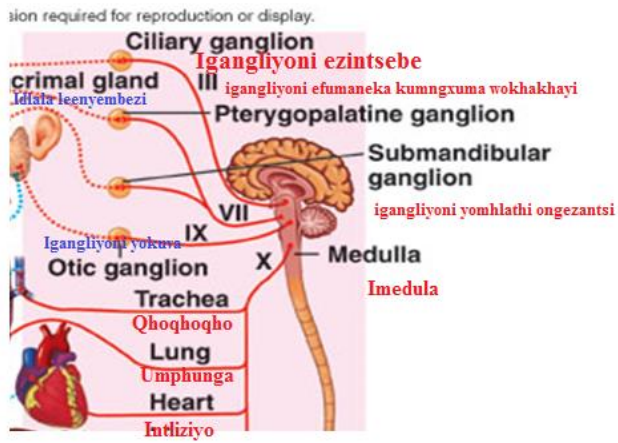


Diagram showing Heart attack

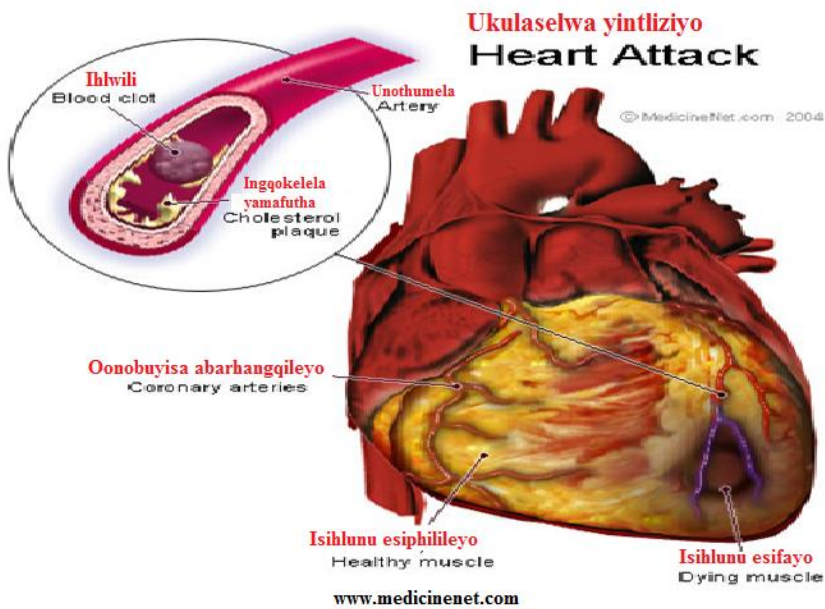
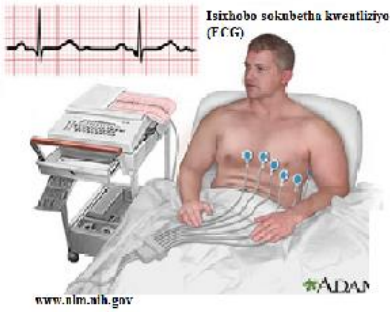
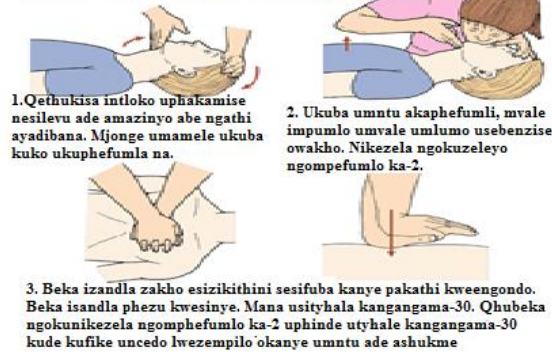


Diagram showing CPR examples



UMSEBENZI WOKUMPOMPA INTLIZIYO (CPR)



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Diagram showing Orientation of the heart

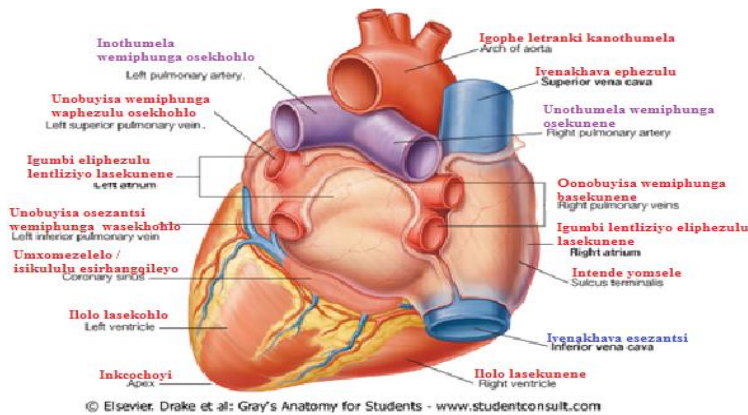
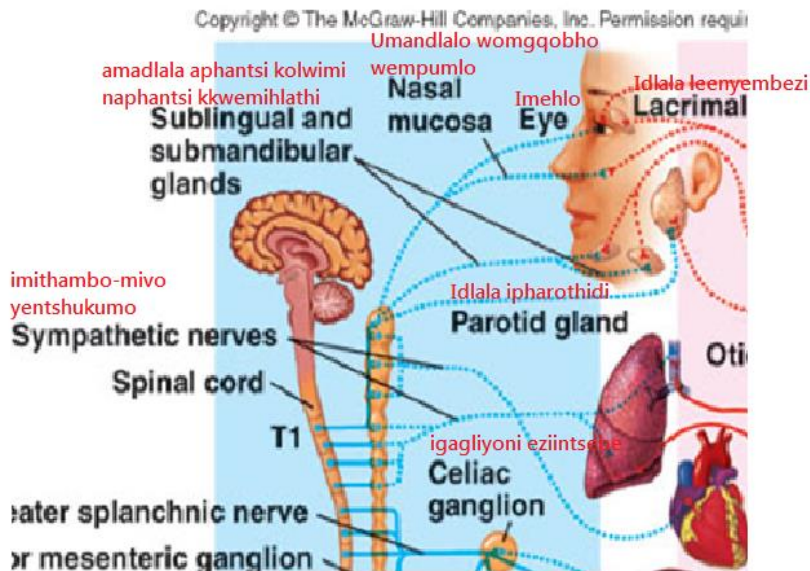
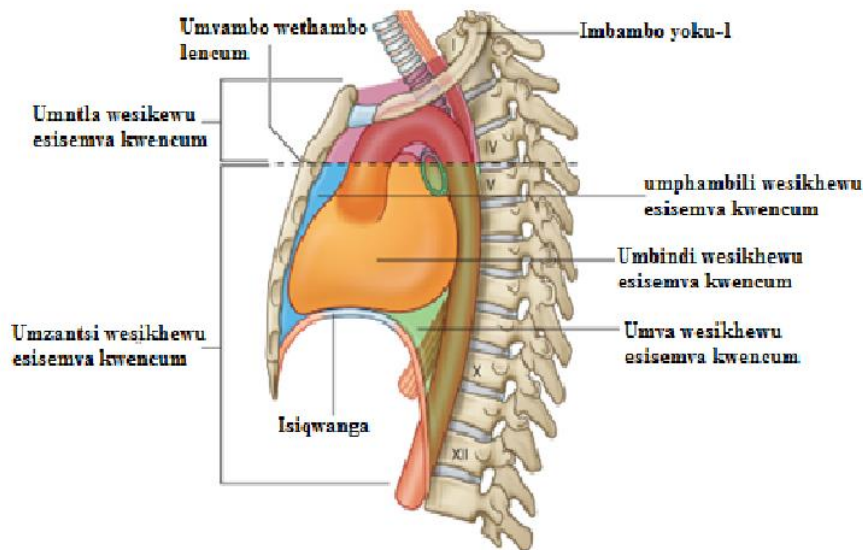


Diagram showing Innervation



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Diagram showing Mediastinum partitions



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Diagram showing Patent ductus arteriosus

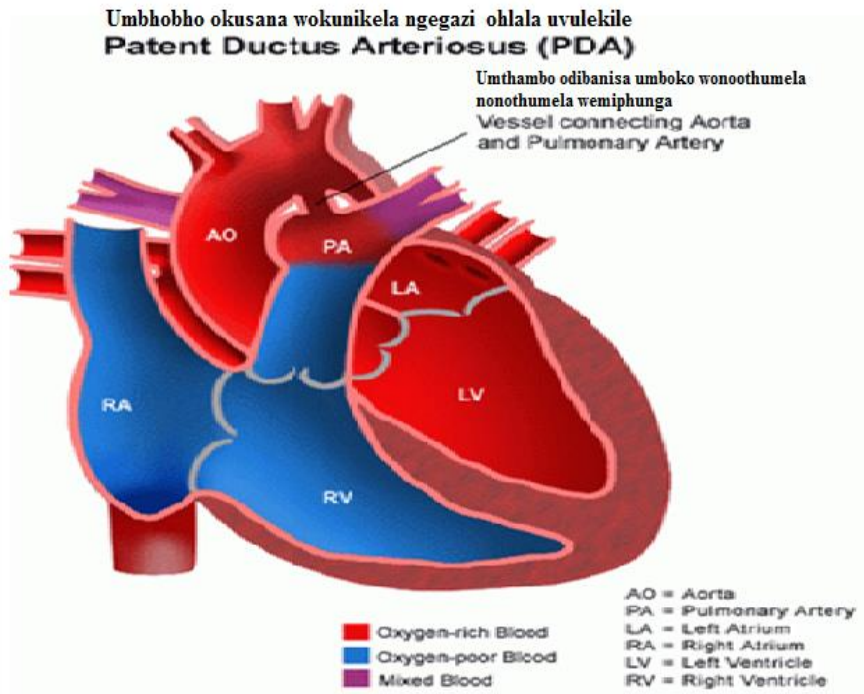


Diagram showing Pericardium diagram

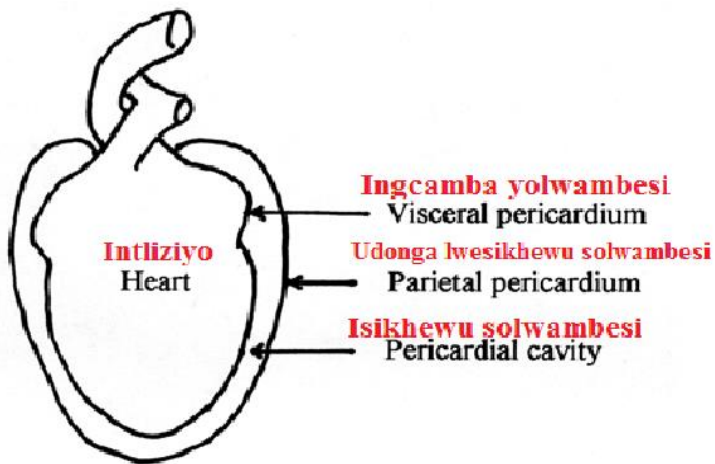
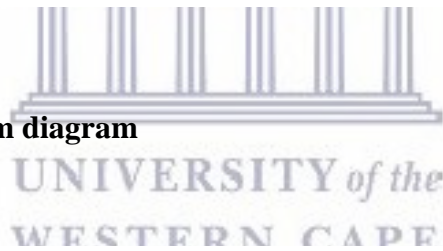


Diagram showing Pericardial cavity

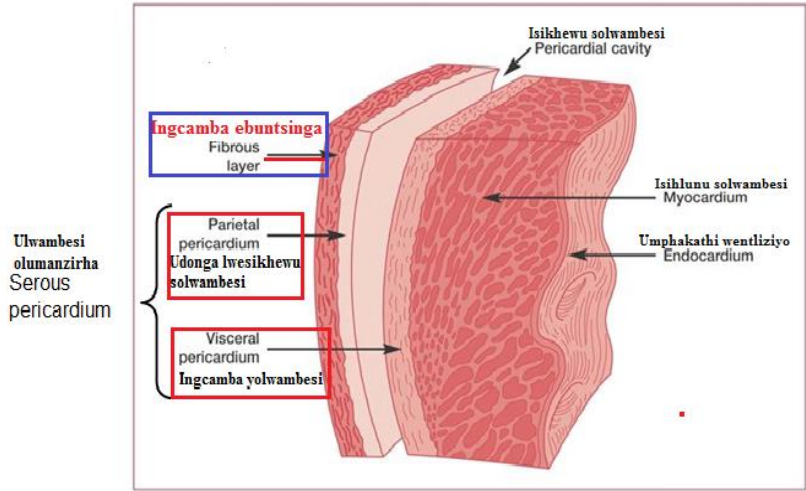
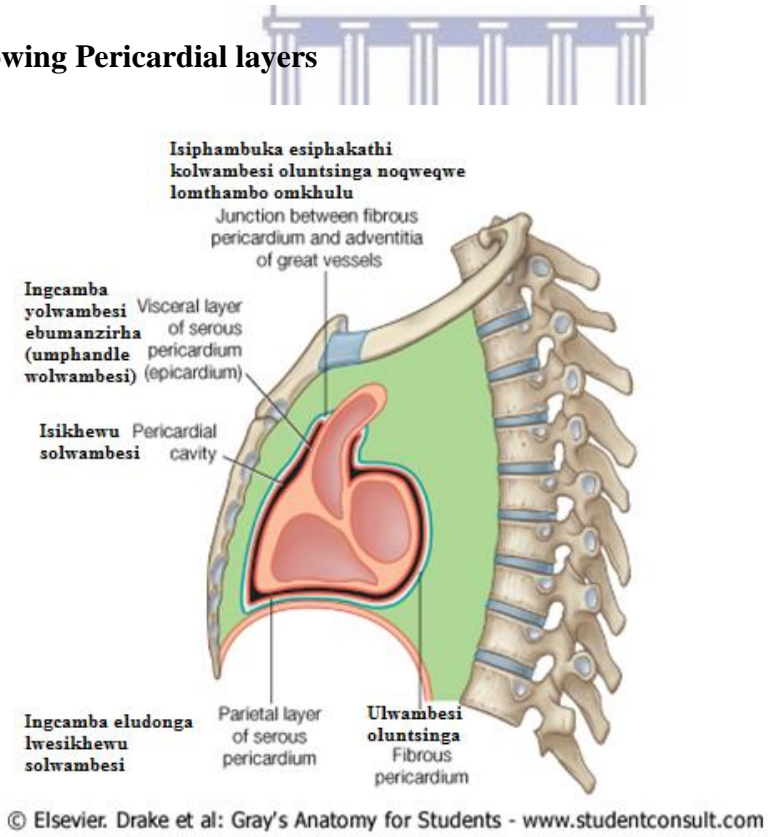


Diagram showing Pericardial layers

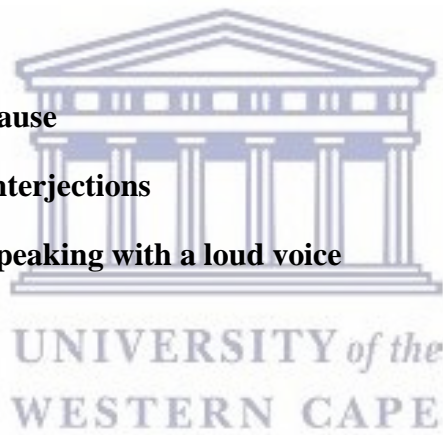


APPENDIX V

TRANSCRIPTION OF FOCUS GROUP DISCUSSIONS

S – *INTERVIEWER*
A – *RESPONDENT 1*
B – *RESPONDENT 2*
C – *RESPONDENT 3*
D – *RESPONDENT 4*
E – *RESPONDENT 5*

... = **Pause**
=== = **Interjections**
Capital Letters = **Speaking with a loud voice**



INTERVIEW 1

S: Ngokuya bendifka ndizama uku-introducer le topic yokuba senze I Hub ngesiXhosa, ingaba niyibone nje ngenkcitha xesha na? kuba ingathi Isixhosa asiwindawo, okanye nibone ngathi ingakhona into esinoyenza ngalonto leyo?

[When I came to you trying to introduce the study where we would be looking at doing HUB in isiXhosa, did you see that as a waste of time because perhaps you believe that isiXhosa is not going anywhere or did you see something that can be done with it?]

A: Mna andizange ndiyibone iyinkcitha xesha, ndayibona iluncedo because kaloku singabanye ngabanye thina asizo model C, ujoji uyasibetha kwezinye indawo. Ayindim ndodwa nabanye abantu base lokishini abangaka ngam abenza le HUB baninzi. Nabanye abayekayo ngenxa yale Hub, umntu apase yonki nto kwa third year akakwazi ukuya kwa 4th year nge nxa yale Hub baphela beyeka uyeva? Bahleli nezo modules zabo kuba betshone iHUB yodwa umntu akakwazi ukugqiba idegree yakhe ngenxa yale HUB because le HUB isisokolise kakhulu.

[I never saw it as a waste of time at all. I saw it helpful because some of us are not Model C's. George (English) is hitting us hard. I am not the only one. There are people who come from locations who are as old as I am doing this HUB module. There are also those who dropped out because of this HUB, people who passed almost everything during their third year but cannot go to forth year because of this HUB and end up dropping out, you hear? They are sitting with those modules because they only failed HUB. A person cannot finish this degree because of this HUB and because this HUB has given us a tough time.]

S: All right

[Al right]

A: So isiXhosa si-right, ndayibona iyinto e-right mna leya.

[So, isiXhosa is right, I see it as a right thing]

B: Mmm mna ngoku wawuzo introducer uchaza ukuba ufuna ukwenza le nto ithile nethile nethile ekuqaleni ndabona mna ba NO i-imposible kuba kukho amagama anzima kwi-HUB oqonda ukuba nokuba ungawa-translator ngesiXhosa akusoze ulazi, like ok ndandifuna mna ukuba OK but ndaqonda ba izondinceda xandimane ndifunda mna lento ngokwe understanding yam ndizawukwazi OK into ethile , sometime into uyakwazi uyibeka ngesiXhosa xa uzibhalela mos, Obvious uzobhala nge-English

[Mhm...when it comes to me, when you came and introduced this, explaining that you wanted to do this and that and that in the beginning, I saw that no it is impossible because there are terms in HUB that are difficult. I thought that even if you were to translate into isiXhosa, you will not be able to understand...like...ok I wanted...ok..but I realised that it is going to help me when I study this for my own understanding. Ok this thing, sometimes you are able to put something in isiXhosa when you are writing on your own, obviously you are going to write it in English...]

S: mhm

[ok]

B: *But for mna ndindisithi izoba important because ezinyizinto awuzazi nge English but ngesixhosa at least uyakwazi uyazi*

[But for me, I thought it was going to be important because some of the things are not understandable in English but in isiXhosa you are able to understand them]

S: Mhm

[Yes]

B: *ndaphinde ndacinga like xa sisibhedlele like u explainela i-patient ibe ingumXhosa then uyayixelela ukuba unentliziyo or unendawo ethile nton nton , then amanye amagama e-English awuzi kuwazi ncam then iye isebenze apo nalapo ke*

[Then again, I thought when we are in hospitals...like...you try to explain to a patient who is Xhosa-speaking that you have a heart disease or have this or that, then there are other terms in English which you cannot clearly explain, so it would work in that sense.]

S: *O ookey akunyanzelekanga sonke siphendule lombuzo lowo ngaphandleni komntu ofuna ukuphosa esivivaneni, kodwa eyona nto ndifuna uyiqonda wena apha nje generally kukuba Isixhosa does it have a role to play mhlawumbi kwi sciences or kwindawo ezinje nge-hu...eeh... yabona okanye nakwezinye isciences izifundo zakona ?*

[Ok, it is not an obligation that we all answer this question unless you have something to say or a contribution, but the main thing I generally want to find out is if you believe that isiXhosa has a role to play maybe in areas like HUB ...em...you see...or in other similar science fields.]

C: *Xhomekeka nomntu like ukhe ubone siya-differ mos singabantu so lonto ithetha ukuthi isiXhosa kuwe xa usimamele okanye xa ufunda ngesiXhosa u-understand-a bhetele kunam mna mhlawumbi xandifunda ngesiLungu ndi-understand-a bhetele. Kuyohluka because singabantu siyohluka ne-background ziyohluka umzekelo uyabon because kum umzekelo isiXhosa kum sinzima kum yabo*

[It depends to each person, like you see, we suffer as people, so that means when you listen to isiXhosa or read in isiXhosa you understand it better than me whereas for me when I read in English I understand it better. It differs because we as people have different background. For instance, for me isiXhosa is difficult, you see...]

S: Mh.mh

[Yes]

C: *Because kum isiXhosa sinzima uyabona because ndikhulele eRhawutini so isiXhosa sam si...si- weak uya-understand-a, so lonto ibangela ukuba kubenzima xa ndizokumamela la record la...la nto yakho.*

[...because to me isiXhosa is very difficult, you see because I grew up in Gauteng so my proficiency in isiXhosa is weak, you understand? So, that makes it difficult when I listen to your recording]

C: Njee uqond' ukuba hee ezinye iindawo ziyandilahla hee sintsokothile isiXhosa salo mntu, incum ndiqond' ukuba yheyi hayi hayi, ndaqond' ukuba ndilahlekile ngoku kodwa yheyi ndaqond' ukuba si-i-nteresting because I don't need ukuba ndibe ndi-translator because kwesi siLungu xa sisithi... uyabona , because yi-language yam even though amanye amagama endohlula but ibangcono because i-sentence ndiyakuva xa uyithethayo xa uyicacisa phaya ndi-stuck nje kwezo nto zincinci yabo , i-usefull yona xa ungumXhosa uyi-undestand-a bhetele yonke la nto but uphinde ujonge enye ukuba ingantsokothi kakhulu uyabona because bakhona abantu ababhidekayo nto ezifana nezo nabangasazi kakuhle isiXhosa but lo nto ke does not mean ukuba ndithi hayi nton nton kule nto because i-usefull kakhulu.

[so, you tend to think that em...I get lost in other parts...em, this person's isiXhosa is very deep. Incum (pericardium),...I tend to think, no...I discover that I am getting lost now, but wow! I also discover that this is interesting because I do not need to translate because even this English, you see...but then this is my language even though I find difficulty in some terms but it becomes better because I can understand the sentence when you say it, when you explain it but get stuck here and there in some areas, you see. It is useful when you are an isiXhosa speaker. You tend to understand it better and still hope that it does not get to be too deep, you see, because there are people who get confused, things like that, who do not understand isiXhosa that well. However, this does not mean that I am saying no, this and that, because this was very useful.]

D: I would say the same thing, because I'm not very good in Xhosa.

[I would say the same thing because I am not very good in isiXhosa]

S: mh.mh

[Yes]

D: Like, am not so ke ngoku then there was elinye igama "rhangqa" yhoo ndaqond' ukuba kubi yhoo..

[Like, I am not... so now, there was this term, 'rhangqa' (surrounding), wow! I thought it is quite bad...]

S: ☺ ☺ ☺ ☺ ☺ ☺ laughing

[laughing]

D: So like yhaa it's a good idea yona but if you could try, and make it clear I don't know isiXhosa sase Kapa esizaw'ba accommodative kubantu abalapha kule environment you understand...

[So, like yes, it is a good idea but if you could try and make it clear. I do not know Cape Town isiXhosa that is going to be accommodative to people in this environment, do you understand?]

S: Yes yes

[Yes, yes]

D: Even though singamaXhosa sikhulele apha singabanye yabo ya understander si raw isiXhosa sakho...

[Even though we are isiXhosa speakers, we grew up here (in Cape Town), you see? You isiXhosa is raw...]

All: Laughing

C: Jonga umzek...

[Look, for example...]

B: Ndaqond' ukuba...

[And I thought...]

C: (pointing to another) uyambona usisi lo mhlaw'mbi uyasiva isiXhosa but akanamdla wokuyimamela la nto, because uyasiva. Apho ndaqonda khona, wandibuza ukuba yinton incum? Ndaqond' ukuba nam andiyaz ndaqond' ukuba aaaaah uyabona yajampisela ukuba ha aah yabo...

[(pointing towards another participant) Do you see this lady? Maybe she understands isiXhosa but she is just not keen to listen to it because she already understands the language. I actually picked it up from when she asked me what is incum (pericardium)? I discovered that ah! I am exposed that no no, you see?]

S: OK yhazi eeeeeeh kulo nto le yalo magama so apho into endinokuyithetha pha terminology?

Ok, so basically what you are referring to here is the terminology?

All: Mm mm mm mm mm mmm at once

[Yes, yes]

S: Yiyo le iyi-problem not necessarily indlela ecaciswe ngayo?

[So, that is the problem, not necessarily the way it was explained?]

D: Terminology is the issue

[Terminology is the issue?]

S: It is the issue. Oh! Now, let me try to put it ngolu hlobo i...i...i...i... ooo... These biological terms uqale nini ukuziva wena nje umthetho wako nokuba zii-cells , nokuba zizinto ezinjenge-oesophagus or njenge thymus umzekelo. Uqale nini ukuziva?

[It is the issue. Oh! Now, let me try and put it this way. The...the...the...the... oh! These biological terms, when was the first time you came across them, for instance, cells or things like esophagus or thymus? When did you start hearing of such?]

C: Lento sice iyisecond language kufuneka uyazile so kwa...kwa from back e-primary sihleli sititshwa kwa...kwapha...

[Since this is a second language, you have to know it. So, from...from...from back in the primary, we were introduced to them from back then...]

S: yes

[Yes]

C: so yonke la nto yasisa....

[So, all that too us to...]

A: ezi..

[To...]

S: Ndithetha ngee-terms ezi uqale nini uyazi or uqale nini ukuziva

[I mean, with regards specifically to these terms, when did you get to know them or first come across them?]

A: Ndiqale std 8.

[In standard 8]

C: Yhaa qale kwasezantsi yaphela seyihlala nase nqondwen ba I cell yinto ethile thile...

[Yes, I started in the lower levels and then it was stuck in my brain that a cell is something like this...]

S: Now, if uqale uyiva ngolo hlobo I'm sure ungena kwakho phaya ungena ungayazi bayintoni i-cell

[Now, if you came across such terms that way, I am sure when you entered the class knowing what a cell is?]

ALL: eeehh!! Mmmmm!!!

[Em...Yes]

S: Sometimes, kufumaniseke ukuba nangoku uyixelelwayo ukuba yintoni ngesiLungu ibe ungasuke uyixelelwe nangesixhosa ukuba yintoni kanye kanye i-cell akunjalo?

[Sometimes, it happens that while you are being told in English, you wish you could hear it in isiXhosa as well what, for example, a cell is, is that not so?]

ALL: mmmmmmmmm

[Yes]

S: Now, do you think ukuba ngaba mhlaw'mbi bekusithwa na xa ufunda iiiii iss iiiii I hub le mhlawumbi ufumanise ukuba if ubuqale mhlawumbi kwangesa siXhosa kwaphayaa ube sele waqhelana nala magama ibiza ku sebenzela lonto le? Let's say for instance if besithetha ngeeeee... ngawaphi kanene amagama ebesiwasebenzisa kanene...? Ngeee... i-pericardium for instance?

[Now, do you think if maybe, if you were studying HUB, if maybe you started studying the...the...the...the..HUB module, perhaps realised that had you started it in isiXhosa early in primary or high school, by the time you do it here, you would have gotten used to the terms, would that have worked for you? Let us say for instance, if you were already using terms like...em...em, what terms? Pericardium, for instance?]

A: mhm.mhm

[Yes]

S: Now if i-pericardium... if sikhumbula kakuhle bekuthwe lulwambesi Now do u think if ola lwambesi lela gama ubudibene nalo kwa kwa Std 8 umzekelo yabona that would make it easier mhlaw'mbi to understand?

[Now, if the pericardium...if we remember correctly, we said it is 'ulwambesi'. Now, you think that term, 'ulwambesi' had it been a term you came across in standard 8, for instance, that would have made it easier to understand, perhaps?]

3a Bekuzoba bhetele because kukho nala nto yokuba ok ndi-understand-e ngokwesiXhosa yonke into yabo qha yila nto yokuba ke wena bhutwam kwenzeke yonke into isisiLungu sesifike kuqala and ukhethe kuba awuna choice yabo...

[It would have been much better because there is an issue whereby I understand everything in isiXhosa but my brother, it happened that everything is in English and thus you do not have any other choice other than English...]

S: Ok ok ok

[Ok, ok ok]

D: there are challenges we trying to understand I hub in English xa sisiya kwisiXhosa, isiXhosa naso ngok haibo sinendawo zazo

[There are challenges when we are trying to understand HUB in English, then when you goto isiXhosa, no, it has its own challenges.]

S: ok ok

[Ok, ok]

E: Khawuthi ndingene nje kancinci apha kwelicala le terminology isiXhosa, ingathi siya silahleka kwaye ingathi siya siphela ...

[Let me briefly share my view on the issue of isiXhosa terminology, it seems as if isiXhosa is getting lost and it is perishing...]

A: mmmm

[Yes]

E: Almost ukubheka pha kwi 70% yabantu abatsha, kufumaniseke ukuba isiXhosa sabo ingathi abasazi. Singabanye thina sikhulele ezilalini sikhulela khona nje kweza terminology zipha ezinye zazo bezizazi thina ziyathethwa kakuhle ezilalini and zingaluncedo kakhulu kwi-science ngohlobo lokuba kubanzima kwa uxelela umzali wako. Akuxelele umzali ukuba ye mntwanam ndisuka esibhedlele kuthiwa ndine presha yintoni leyo, kubenzima ukumxelela kubenzima naxa usesibhedlele udibene nomntu othetha isiXhosa ukuba ugula yintoni uzakwenziwa ntoni

[Almost up to 70% of the youth does know their own isiXhosa. Some of us grew up in rural areas. Growing up there, we already knew some the terminology used in your translation because they are spoken in rural areas and they can be very useful in science in the sence that, it gets to be very difficult to tell your parent. Your parent tell you that, 'my child, I am coming from the hospital and they told me that I have blood pressure, what is that? It becomes difficult to tell the parent. Furthermore, when you work at the hospital, and be in contact with an isiXhosa-speaking patient, it becomes difficult to explain what the disease is and what is to be done.]

S: Mm mm ok, ok aaaah how about I English yona, I role yayo, would you say i-English is a superior language kunezinye okanye shall I say, would you like to see I English iyiyo yodwa ehamba phambili kunezinye kwi science

[Em...ok, ok, em...how about English, its role, would you say English is a superior language compared to others or shall I say, would you like to see English bing the only leading language in sciences?]

E: The way it was given to us it was always the superior language

[The way it was given to us, it was always the superior language.]

S: Alright, senditsho ukuba is that what thina we aspire to?

[All right, what I mean is, is it what what we aspire to see?]

C: Ingxaki thina we have been programmed, since eprimary ngalo ndlela ingxaki...

[The problem is that we have been programmed since primary school, that way the problem [to think English is the superior language...]

S: Xa uthi we are programmed uthini ndicela undicacisele

[When you say we are programmed, what do you mean, please explain?]

C: Sititshiwe ukuba English is the language ‘ it’s all about English, only way you can communicate nabanye abantu Common language

[We are taught that English is the language. It is all about English. The only way you can communicate with other people...common language.]

E: I think it has been socially English has been acentric as this language

[I think it has been socially...English has been accentric as this language...]

S: ok oryt which means the way sikhule ngakona sikhule sisazi i-English as the superior language ?

[Ok, all right, which means the way we grew up, we grew up with the idea that English is the superior language?]

E: Yona asikhulanga siyazi as superior language, kuthi thina ifakwe ngathi ziblinkers ezi zifakwa emahashini ba makahambe straight , thina sikhuliswe ngolo hlobo ngathi i-English iyilinguafranka ngathi yeyona language ithethwa umhlaba wonke but ufumaniseka kumazwe amaninzi ayithethwa nothethwa kwa even oopresidenti bamanye amazwe xa besenza intetho emazweni abo ayithethwa nokuthethwa

[We did not necessarily grow up knowing English as a superior language. It was just instilled to us as if we were like a horse given blinkers so that it could walk straight. We grew up in such a way as well with regards to English, being the lingua franca as if it is the only language spoken all over the world. However, you find out that in other countries it is not even spoken by the presidents of those countries when making speeches, it is not spoken.]

S: ok

[Ok]

E: Izinto ezininzi thina apha e- Afrika sithathengokuzixelelwa umzekelo kuthwa apha kwakuko i-slave, kwakungeko slave apha ngabantu abathatwa apha bengezo slave benziwa islave ngoku ingathi apha kwakuko islave yinto esikhule sixelelwa yona lo nto even though ingekho njalo.

[Here in Africa, we are told many things, for, instance, we are told that there were slaves. There were noslaves here. People were taken from here not as slaves but were made slaves. Now, it is as if they were slaves and it is something we grew up being told even though it is not so.]

S: Ok, now, going forward ke ngoku would you like see isiXhosa sititshwa along side I English kwi hub umzekelo okanye would you be comfortable if kungathiwa utitshwa zonke ezizinto ngesixhosa sodwa

[Ok, now, going forward, would you like to see isiXhosa being used alongside English in the HUB module for instance, or would you be comfortable if in all your subjects isiXhosa becomes the language used?]

E: here is the thing adapting to another language is...

[Here is the thing, adapting to another language is...]

B: Yhaaa izokuba yingxaki ke ngoku...

[Yes, it is going to be a problem now...]

S: Ok so basically what you are saying is aaa you rather see them zihamba in parallel which means kukho isingesi kukho nesixhosa at the same time like ngolu hlobo besisenzangalo pa ezi notes

[Ok, so what you are basically saying is ...em...you rather see them parallel which means, English and isiXhosa going together just like we did with those notes I provided?]

B: Kungangcono kanjalo...

[That would be much better]

C: Yhaa kungangcono kanjalo ukwazi uku comperisha ba yhaa yincum le yhaa yi pericardium le so ube familiya kulento ithethwayo kuthi thina bantu bane ngxaki nesixhosa

[Yes, it is much better like that so that you can be able to compare that yes that is 'incum' this side and it is 'pericardium' that side so you can be familia with what it talked about especially to people like us who have a problem with isiXhosa.]

E: Ingalu ncedo kakhulu bhuti ngohlobo lokuba xa sinothi sisityeshele isiXhosa kuqhutyekwe nesiLungu abantu abaninzi nabantu abadala bayafuna ukuqhubekeka kwaye ngabona baqhubekeka kakhulu. Xa kunokuqhutyekwa ngesiLungu sodwa lo nto ingababekela ecaleni umzekelo nanku umzali isiLungu akasazi kukhona afuna I drivers licence isilungu akasazi ukubana belingeko icala lesixhosa xa eyobhala I leaners license yake abezokube secaleni...

[It would so much help, brother in the sense that if we can neglect isiXhosa and continue with English, many people including the elders want to continue with English. In fact, they are the ones especially, who very much want to continue with English, even though continuing with English would still marginalize them. For instance, here comes a parent who knows nothing about English but wants to a drivers licence. If there was no isiXhosa side when writing learner's licence, that parent would have been disadvantaged.]

ALL 'Mm

[Yes]

A: mm besizosafarisha...

[We were going to suffer...]

S: Ok kulo point kanye ke ngoku taking us forward to use of isiXhosa nesiNgesi at the same time yhaa together, ndifuna nje undithathe undise when you started looking at isiXhosa kwiHUB le besiyenza and looked kwi-English. How did you actually compare the two ngela xesha wena ubuqonda ukuba ufuna umamela la CD okanye ufunda la maphepha zeziphi izinto ezithe zakwenza uqonde ba isiXhosa asiyilungelanga I science okanye siyilungele iculture ..?

[Ok, on that same point now where isiXhosa and English can be used together, taking it forward. I want you to take me back to when you started looking at HUB in isiXhosa particularly, the one we did and looked at English. How do you actually compare the two while you were watching the DVD or reading the notes? Also, what are the things that made you realise isiXhosa is not effective or it is effective in studies like science?]

D: I think the only issue with me was the big words but ke it was helpful but ibengala magama kengoku esixhosa ubona ukuba yhoob uyo find out-a encwadini kengoku, ube sowuyi-understanda endaweni yoba ubuzokulijonga kwi-HUB then xa usiya kwisiXhosa qonduba ok ndiya andastenda qha sometimes kengoku ujonge i-HUB xa usiya esiXhoseni still ufike funeke uyo find out ukuba yintoni le .. yabona. Mna I think that was the only issue otherwise

[The only issue with me was the big words but then it was helpful but there were those big terms in isiXhosa that made me see that I have to also find out from the book (isiXhosa dictionary) in order to understand instead of looking at the HUB book. Then, when you look at isiXhosa you start understanding sometimes but other times when you go to isiXhosa to understand you still need to go and find out what that word is, you see. SO, for me that was the only issue, otherwise...]

S: Is it not the same thing oyenzayo mhlawumbi xa unikwe I English yodwa ?

[Is it not the same thing you do when you are given the English-only text?]

D: But kaloku English is easier ngoku

[But now, English is easier]

S: Ok ok

[Ok, ok]

C: But mna indincedile shem to be honest. Bendisithi umzekelo, xa ndifunda,... kubhaliwe mos gesiXhosa kula video hne?

[But to be honest, when it comes to me, shame, it helped me. For example, when I read, it is written in isiXhosa in that video, right?]

S: If ndikhumbula kakuhle sikona isiXhosa....

[As far as I can remember, yes, there is isiXhosa.]

C: Iyenze ndabona ukuba hayini ukhe ubone into uyifunde ubone ukuba uyazi ngengqondo but ke ngoku xa sele uyi-understand-a ngokwe-understanding ye-language yakowenu uqonde ukuba hayi man yenze i-sence ihlale entliziyweni ihlale nasengqondweni because uza kuyikhumbula mos kunokuba ube unqayana nezi sentence so ivele ibe real xa sele I translethwe nge-language yakowenu

[It made me truly realise that no, have you wondered how you get to study something and realise that you understand it in your head. But you realise that no man once you understand it in your own language, it makes sense and stays in your heart and also stays in your mind because you will remember it this time instead of cramming these sentences. So, it becomes real when it is translated into your own language.]

S: Oraythi

[All right]

E: Mna ngelixesha ndandiqala ukudibana nayo kuba sele sikulo mgangatho sikuwo ndaqonda ba izakuba nzima kodwa ukuba besibuyela ekuqaleni inoba kwakupha ko Std 4 ufumaniseke ukuba ngoku kuthiwa nizokufunda inovel ufumaniseke ba amagama odibana nawo ngala magama kuthiwa zii-bombastic words kufumaniseke ukuba kunzima uyaqala ukudibana nawo. Ibibakona i-dictionary apo ikunceda kona naso isixhosa ukubangaba singaqalwa pha kulamgangatho usezantsi nangoku zikhona I dictionary zesixhosa umntu xa edibana nelogama limxake uzobheka kwi dictionaty but xasele uqhubekeka nayo lento izode ufumaniseke ba iba lula njesilungu esi cause isilungu naso wasiqala kancinci zange uvele sele usithetha

[When, it comes to me, when I first encountered this, because we are already in this level, I realized that it is going to be difficult. However, if we were to take it to perhaps to the standard 4 level where even when you read a novel, you encounter words referred to as 'bombastic' words, which you encounter for the first time, there was a dictionary which helped you understand. If being taught this in isiXhosa starting in the lower levels, and have dictionaries in isiXhosa so that when a person encounters that difficult word, he/she can use the isiXhosa dictionary. But when one continues with this, it will eventually become easy just like this English because the English itself one learnt it gradually, he/she did not just speak it out of the blue.]

C: So yiyo ke lento iba yichallenge cause sithe gqi sele sibadala yonke into sisilungu so isixhosa basishiya eback and theres no way ba singajika siyosithatha...

[That is why it becomes a challenge because this translation has come at a later stage when we are much older, and everything is in English. So, isiXhosa has been left at the back behind, and there is no way that we can turn back to fetch it...]

A: But siyabuyiswa ngok isixhosa aph' eBush nge opening day kwathwa kufunabantwabazo kwenzi I education abantu abazi titsha isixhosa ezikolweni kuba kuyabonwangok ba isixhosa siya siphela abantwana bafundiswa ezikolwenizabelungu so kwatshiwo eBush..

[But it is being brought back here in this university. During the opening day, it was said that students who are going to do education, students who are going to be isiXhosa teachers iin schools are needed because it has been discovered that isiXhosa is perishing and children are being taught in English schools. It was said in this university.]

S: waww bendingayazi kwalonto leyo 😊 😊

[Wow! That I also did no know.]

A: Ubungayazi ? hayi kwatshiwo eBush

[Did you know? They said it in this university]

S: All right

[All right]

E: Isixhosa ngoku siyaphela abantu abaninzi bazakuxelela ngok bay yintoni i-need ykuoba abantwana bam babe befunda isixhosa if bayakwazi nje ukusithetha nabantu abangamaXhosa ayisekho nge-language ingemali kangangokuba kuthiwa kwalapha eMzantsi eyona language ibhatala kakhulu akuqali kwa i-languages zalapha ...

[IsiXhosa in our days is perishing. Many people will tell you, what is the need for my children to study isiXhosa if they can speak it with other isiXhosa-speaking people?it is no longer about the language, it is about the money to an extent that in South Africa the language that pays more is not a language from here.]

S: Whaau.

[Wow!]

E: Eyesithathu i-language yalapha sisiZulu isiXhosa izoba sesesine

[IsiZulu is the third one while isiXhosa is the fourth.]

S: Basically eyonanto siyithethayo isixhosa esi , eza lecture material zaziryt zona qha ingxaki ingase kusetyenziswe amagama angathi ...

[Basically, what we are saying is that isiXhosa, ...those lecture materials were all right but perhaps there should have been words that are===]

E: ===aqhelekileyo

[===frequently used]

S: umzekelo uba besithetha ngentlizio , iqhelekile ryt but ke if besithetha ngamagama anje ngo pericudium mhlwumbi yabo...

[For example, if we talk of intliziyo (heart), it is a known word, right? But if we speak the term pericardium maybe, you see...]

C: umzekelo kutwa ipericudium icaciswe nangesixhosa bayenzani ngeke uphinde uyilibale...

[For example, if we refer to pericardium it should be explained in isiXhosa as to what is its function, that way it will not be easy to forget.]

S: Ok ok so siyavumelana ba isixhosa esi singasetyenziswa qha amagama funeke sizame ukuwacacisa?

[Ok, ok, so we all agree that if isiXhosa could be used but the terms should be explained?]

A: Ewe

[Yes]

S: Because I think pha ekuqaleni ubuyakhumbula pha kula vido ekuqaleni kuzanywa ukucaciswa ona la magama yabona but ke ngoku njengokuba usiya uphinde ulibale ukuba kanene ukuba kekuthiwe yintoni leya singabe siyavumelana kulo nto leyo?

[Because I think in the beginning if we remember correctly in the video, there was an attempt to explain the terms, you see? But then as you go on in the video you tend to forget some terms as to what was referred to as what, do we all agree with that point?]

All: “ yhaaaaaaaa”

[Yes]

S: Ok, all right, now, kuzile kweza kweza kukho la test besikhe sayibhala uyabona ndifuna ke undise kulo nto leyo besikhe sazama uku-consult-a eza lecture materials esiXhoseni nasesiNgesini for la test?

[Ok, all right, now, it went on and on and then we got to the test, you see? I want you to take me to that part. Did any of you consult any of those lecture materials that are in isiXhosa and English for that test?]

C: Khawuphinde umbuzo

[Can you please repeat the question?]

S: uyakhumbula ngoku basizawwubhala la testanyana...?

[Do you remember the time we were going to write that small test...?]

A: yhaa...

[Yes...]

S: So, sikhe saya mhlawumbi si...sithi ok... kwakuzakubhalwa mos ku lecture 1 qha and u lecture 1 wayekhona wesiXhosa ekhona owesiLungu, yeyiphi yona esike sayijonja kakulu pha phakathi kwazo?

[So, did we maybe...we...we...ok...we were going to write from lecture one only and lecture one was in isiXhosa and English, which of the two lectures did we consult more?]

C: Heyi! Kuba ke sasileqa mna andifuni ukukuqhatha la mini wafika ngexesha elirongo .. kuba sasileqa ukuyokubhala

[Wow! Because we were in so much hurry, and I do not want to lie to you, you came at the wrong time that day because we were all rushing to go to write another test.]

All: Laughing

S: Ok zezimpendulo zifunekayo ezi ukwenzela sizokubona ukuba singayenza njani le nto ok kuba sasileqa kwanyanzeleka ukuba sikhe esiLungwini?

[This is exactly what I want, honesty so that we can see how we can do this. Ok, you are saying we were rushing so you decided to only look at English?]

B Sakha esiLungwini

[We chose English.]

S: Bendizobuza lo nto kanye ba sakha esilungwini yilento yoba siqhelekile ?

[So, I wanted to ask that question. So, you chose English because you were in a hurry]

A: Ewe enye into kwakuseku-late and kwabe kufuneka sibhalile.

[Yes, another thing is that it was already late for us because we needed to go and write.]

B: Mmmm

[Yes]

S: All right

[All right]

A: Hub inzima le

[This HUB is very difficult.]

S: hii hi hih iiiih ii oryt

[Laughing, all right]

D: Siyalibazisa yoo isixhosa ithi isentence iyi 1 ibeyi paragraph.

[IsiXhosa is time consuming. One sentence can be equivalent to a paragraph.]

S: All right, mandi... ndinonto... ndinombuzo nje endirhalela ukukhe ndiwubuze. Generally xa sizokubhala i-test umzekelo le ye-HUB eeeeeeh!! Ingaba akhona amthuba whereby mhlawumbi sifunda siyigroup masiqale apho kuqala?

All right, let me...I have..I have a question I wish to ask. Generally, when we are going to write a test, for instance the one for HUB, em...are there instances whereby maybe we study as a group? Let us start there first.]

A: Ewe siyifunda siyi group umntu uqale azfundele

[Yes, we do study as a group, but you first study on your own.]

S: Njengokuba nifunda niyi group===

[While studying as a group===]

A: then sidibane sithathe previous question papers yabo si sidiskhase zona

[===then we meet up and take previous question papers and discuss them]

S: Ngelix esha nidiskhasayo ingaba nidiskhasa ngesiLungu okanye ngesiXhosa?

[While you discuss, do you discuss in English or isiXhosa?]

All: Siyaxuba siya-mix-a

[We mix]

S: OK all right senditsho ukuba iye ivakale bhetele ? kuba hayi maan apha kuthethwa ngee pericardial effusion uyabona? Njengok'ba kuthethwa ngee-pericardial effusion nje, ufumanise ukuba uyazi itsho yavakala kamandi ngesiXhosa xa ndithe ndathetha ngokuphuphumala kolwambesi uyabona kanti ngula effusion lo thetha ukuphuphumala then ye ndiyi andastende nto ba yincindi le kuthethwangayo ngaba iyanceda?

[Ok, all right, I mean, does it sound better or does it induce better understanding? This is because no man, here, there is pericardial effusion, you see? When referring to pericardial effusion, do you find instances where it induces a better understanding in isiXhosa when I for instance the term is used 'ukuphuphumala kolwambesi' you see? Only to find that it is that effusion that means 'ukuphuphumala (overflow), then I get to understand it better that it is the fluid that is referred to here, does that help?]

All: Iyanceda

[It helps]

B: Nakwi question paper ngase soloko ikona

[I wish to see this in a question paper as well]

A: isincece kakhulu

[It helped us a lot]

E: Kangangokuba apha kwi HUB iyafundwa kakhulu bakona abayaziyo nabayithandayo abanye bayifunda njee ngelo xesha bakwazi ukuyipasa kakhulu ngoba if izakubhalwa ngoku i-HUB abantu benza la nto kuthiwa nunkqaya.

[As a result in HUB it is studied a lot. There are those who know and like it. Others study it during the time they are going to write just to pass it and they pass it a lot too because if HUB is going to be written now, they do what is known as cramming.]

A: yhaa

[Yes]

E: Unkqaya unkqaye noo-is ubuye ne total okanye wakugqiba ufumaniseke ukuba walibala igama layi 1 uyilibala yonke la nto

[There are those who know and like it. Others study it during the time they are going to write just to pass it and they pass it a lot too because if HUB is going to be written now, they do what is known as cramming]

S: Yhoo!

[Wow]

E: Kanti ukuba le nto ibititshwa ngesiXhosa uyayazi le nto akukho ne-need yokuba ube uyinkqaya...

[Whereas, if this was taught in isiXhosa, there would not be a need to cram.]

All: Yaaa...

[Yes]

S: All right, eeeeh siya ekuqweleni zinkosi uyabo njengokuba sizoqwela nje ndifuna nje i...i...i...i...i , kula test sigqibokuyibhala kukhe kwakho into yokuba ufumanise ukuba bakhona abantu abaphendule ngesiXhosa ingaba sinabo apha?

[All right, em...we are coming to the end of this conversation. Now that we are about to finish, the...the...the...the, in the test that we wrote, I found out that there are those who answered the part in isiXhosa, do we have them here?]

(No one raised hands)

All: Laughing

S: Besinabo abantu ebebe phendule ngesixhosa

[We had people who answered in isiXhosa.]

A: laughing ewe bebekona

[Yes there were]

S: Senditsh' ukuba sinabo apha ?

[I mean do we have them here?]

ALL: Again no one raised any hand

A: Hayi bahlala e loxion

[No, they stay in informal settlement]

All of them laughing again

S: Because i...i...mandithethe inyani. Uyazi aba bantu baphendule ngasiXhosa ndiye ndothuka because i-most yabo kuye kwafumanisa ukuba baye bafumana ii-higher marks than aba bantu bebephendula ngesiNgesi.

[Because, the...the...let me tell you the truth. Do you know that those people who answered in isiXhosa surprised me because I discovered that most of them got higher marks than those who answered in English.]

A: mmm

[Yes...]

S: And ikhe yandothusa lo nto leyo kancinci. Inokuba yenziwe yintoni kengoku lo nto? Ndiye ndazibuza.

[And that surprised me a bit. What caused that? I asked myself.]

B: Mhlawumbi baqale kwaphaya esiXhoseni ukufunda i-question baqhubeka nayo

[Maybe, they started on the isiXhosa version and continued with it.]

S: Wena wavele wangena esiLungwini?

[And you went straight to English?]

C: Ingxaki yam yaba lixesha

[My problem was time]

S: Ok ok ok so now if bekusithiwa umzekelo nantsi i-HUB, zonke ii-lectures zabo zingsexhosa nangesingesi inga-right lo nto leyo?

[Ok, ok ok, so now, if for instance here is HUB, and all lectures are in both English and isiXhosa, would that be fine for you?]

All: Mhm.mhm

[Yes]

S: Now, ke ngoku sisene-problem yokuba xa mhlawumbi usiyokubhala umzekelo kusabhalwa nge-English ayinakusichana lo nto leyo?

[Now, we are still having a problem of for instance, when writing, we still write in English, would that not cause a problem?]

E: Eyiphi? Le yokuba kubhalwa nge-English?

[Which one? The fact that we are still writing in English?]

A: Ayinakusichana ngento yokuba oko wawufumana ii-notes===

[It would not be a problem because all this time you get your notes===]

B: ===Awuzifumani ngesiXhosa?

[You do not get them in isiXhosa?]

A: === uzifumana ngesiNgesi , uyacaciseleka kengoku into ongayiqondiyo nantsi yacaciswa phaya esiXhoseni. So, uyakwazi ke ngoku uthi xa uphendula ke ngoku, uphendule ngesiNgesi kuba uyivile. Uncedwe sesa siXhosa.

[===you get them in English, but you get the explanation and what you may not understand in isiXhosa. So, you are able to answer now in English because you have understood. You were assisted by isiXhosa.]

B: Ewe

[Yes]

C: Kuba ubusowuyazi uthatha nje ngokudibanisa amagama kube sekuphuma le nto ifunwayo (laughing).

[Because you already knew it (in isiXhosa), all you do is put words together to produce what is required, (laughing).]

S: Because into endibuzisayo, if bekuthwa mhlawumbi nazi sizenzile ke ngoku ii-HUB sazenza neeeee... sazifumana ngesiXhosa nangesiNgesi, bekuzakubanjani ukuba ne-assessment le ne-exam ibibekwa ngolo hlobo, Ibinganjani lo nto leyo?

[Because, the reason I am asking is that, if maybe we did, HUB and the... and managed to do them in isiXhosa and English, how would it be if the assessment and exams was also the same (in isiXhosa and English), how would that be for you?]

A: Ukuba zititshwe ngesiXhosa?

[If they they were taught in isiXhosa?]

All: (Talking at once, excited voices) ngesiXhosa?

[(Talking at once, excited voices) in isiXhosa?]

S: Both ngesiXhosa ne-English

[Both in isiXhosa and English.]

A: Singavuya kakhuulu gqithi

[We would be very happy]

B: Usenokuthi iquestion.... Interrupted

[The question may say===]

C: Ukhe uyibone i-question ungeva kwale nto ifunwayo===

[Have you experience a situation where you do not even understand what is being asked===]

All: Talking at once

A: Ubenewari ngoku kuba bendiyazi la answer qha bendingayiva ba ithini i-question

[Then you get so worried because you know the answer but did not understand what was asked]

B: eeeewe

[Yes]

E: And injalo inganceda lo nto leyo ufumaniseke ukuba into eyenzekayo ngoku ufumaniseke ukuba siyabhala ngoku from lecture 1 to lecture 15 njengokuba abanye benkqaya abanye befundela ukuyazi if uyayifunda nje la nto ngesiXhosa uyayi-understand-a akukho ne-need le yokuba ube unqaya kanti ekuyifundeni kwako ngesisi Lungu wayinkqaya ubanewari ukuba i-question ethile ingase ingaphumi kuba inde le nto ndiyinkqayayo.

[And it is like that. You find that what happens is we write now from lecture 1 to 15. While others are cramming others are studying to understand. If you were to study it in isiXhosa, you understand, there is no need to cram whereas when you study it in English and cram it, you get worried and wish that a certain question would not come out because you need to cram a very long chapter.]

A: Izakuba ndimshiye namhlanje u question X ndanshiya apho lo 5 marks

[You will get to a point where you say, 'I left that 5 marks']

All laughing at once

S: Now...

[Now...]

(All talking softly and low)

S: ...no guys singathetha sidinwe ngalento. Eeeeh now kengok ukuya phambili yabo xa nohlukene ne hub yabo xa ujonge abantu abazayo would you recommend ukuba===

[...No guys, we would talk till we get tired about that. Em...now, going forward, you, when you do not do this HUB module anymore, when you look at people that are yet to do this module, would you recommend this===

A: ===bangancedakala

[===this would help them]

S: ===ukuba bangene kuzo zombini isiXhosa nesiLungu

[If they could get it in both isiXhosa and English?]

All: Yes

[Yes]

A: Eeeeeewe akuzi bantwana bodwa nabante abadala bayeza ba aplayile bayeza bazofunda

[(Long yes), it is not just children but elderly people also come and apply, they come and study]

S: mmm

[Yeah]

A: because ayigugelwa

[Because you never get too old to study]

ALL: (laughing)

S: kawuzi picturisha sele kusithiwa nguwe lo utitsha le hub mhlawumbi kubantu abathetha isixhosa kuphela would you be willing wena ukungena utitsha le program

[Can you picture yourself being the one to teach HUB maybe to isiXhosa speakers, would you be willing to enter such a program where you teach them?]

All: Soft voices mumbling

S: xasele kustwa wena kawuke u tyhutharisha le hub ngesixhosa nangesingesi ?

[Let us say, you are asked to tutor this HUB in isiXhosa and also in English?]

C: Hyi yho zinto ezi ncinci ezo

[No, that is nothing]

B: Because ndizokube ndinayo lento ndizoyititsha

[Because I will have the skill of what I will be teaching]

S: Could you recommend kwabanye abantu ukuba bayenze lonto leyo ?

[Could you recommend it to other people to take on HUB in isiXhosa?]

A: Yes

[Yes]

S: Because ndiye ndajonga i...i... umbuzo ebendikhe nawujonga phaya ndafumaniseka abantu abaninzi bathe ee... isiXhosa hayi isiXhosa si-right ukuba makubekho ii-lecture materials kuzo bakugqiba bathi ekuphenduleni umntu sele itshintshe ingqondo, ingaba bakhona abantu abayifumeneyo lo nto? Okanye aqonde ukuba esi siXhosa ayisiso esi bendisicingela ukuba yhei ayisiso esi siXhosa bendicinga ukuba izokuba siso ndi-endaphe ndisithi NO isixhosa asinakuyilungela lo nto leyo ngaba bakhona na abantu abayifuneneyo lo nto leyo?

[Because I looked and realized that the...the..., the question that I looked at people said it is right that there could be lecture materials in isiXhosa but on the second questionnaire, they answered saying no, changing their minds. Do we have people who answered like that here? Or someone who thought isiXhosa was necessary but changed minds realizing that this is not the kind of isiXhosa that I was expecting and ended up saying No isiXhosa is not be used in sciences. Do we have any one who share the same sentiments?]

All: (in soft voices) mm mm

[(in soft voices) yes]

S: So eyona nto iyi problem ngala ukumagama akoyikisayo not necessarily ukuba isiXhosa asikho right eeeeeh I think?

[SO, the problem is the terminology used that scares you not necessarily that isiXhosa is not right, em...I think?]

ALL: (Laughing voices)

S: Ndikhe ndayicinga lo nto leyo, sele sibugqiba eeeeeh ukuba ngaba besenijonga I terminology le isetyenzisiweyo phaya ayinoba bhetele mhlawumbi ba singakhe sihlale sonke siyicacise la magama anzima sihlale sonke siwaqulunqe Sisonke okanye la mntu uzanawo makazenawo eyedwa?

[I thought about that. We are almost done. If we could look at this terminology that has been used in the isiXhosa material, would it not be better if we all could sit together and come up with terms or do you prefer the person who came up with them to continue to do so?]

D: That might help but lixesha eli lifutshane liyi challenge

[That might help but the time we have is short and limited.]

S: Okanye sihlale kwa phaya ngeholideyi...?

[Or else during the holidays...?]

D: Iyingxaki kwayona I nursing ingumsebenzi inga right lonto leyo but ingayi challenge

[That is still a problem because nursing is work on its own, it would be right but it would be a challenge.]

S: Ingathiiiiiiii zonke ezizinto bedizifuna ndizifumene

[I think I got most of the things I was looking for]

All: (laughing)

S: Mandibulele zinkosi if iphinde yakhona enye into sakuphinda si-emailelane

Let me thank you, if there is another thing, we will email each other for now, good luck with you exams if I do not see you again.

END.....END.....END OF INTERVIEW 1



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INTERVIEW 2

S – INTERVIEWER

B2 – RESPONDENT 1

C2 – RESPONDENT 2

D2 – RESPONDENT 3

E2 – RESPONDENT 4

F2 – RESPONDENT 5

G – RESPONDENT 6

S: *When I look at Question 4, which said “even if it were possible to use isiXhosa for teaching and providing lecture materials in my HUB 228 module, that could not happen now. It would take a very long time for the language to be developed, before it could be used.” Abantu abaninzi in fact iddiffence yona yi 41 percent, for instance iresults zayo yona la question. Abantu abaninzi... eh... abantu abaninzi babesithi naaah we don’t think it’s going to be possible and abantu abaninzi babesithi it would take a very long time for it to actually work but then again kwiquestionnaire yesibini ndafumanisa into yokuba no man there are a lot of people abathi no maan it won’t take a very long time ingenzeka le nto, bendifuna nje nihlomle apho Kanye ukuba kuye kwathini*

[When I look at Question 4, which said “even if it were possible to use isiXhosa for teaching and providing lecture materials in my HUB 228 module, that could not happen now. It would take a very long time for the language to be developed, before it could be used.” Many people in fact, the 41 percent, for instance resulting from the question. Many people... eh... many people were saying naaah... we do not think it’s going to be possible and in fact, many people were saying it would take a very long time for it to actually work. But, then, again on the second questionnaire I found out that no man there are a lot of people who say no maan it won’t take a very long. This can happen. I wanted to find out from you if maybe there was any change to what you may have believed before in respect to the initial 41% to the increased number that said. I wanted you to share your views on that. What has happened, did you perhaps have a change of heart?]

B2: Ukuthitshwa isiXhosa, i...i.. iHUB ititshwe ngesiXhosa?

[You mean em...em...HUB being taught in isiXhosa?]

S: Ya, ngolwa hlobo ndandenze ngalo. Lo mbuzo wawusithi em.ndicinga okokuba ingathatha ixesha elide before that happens.

[Yes, exactly the way I did it. The question basically was trying to find out if you...em...em if you guys thought..em eh...yes, it would take a very long before that happens.]

B2: Ok

[ok,]

S: but apha e...ndiye ndafumanisa ukuba after niye nayibona loo nto leyo ukuba ingenzeka liye lenyuka inani labo bantu abthi ya ingenzeka.

[but here, I found out that after you have seen this happening, the number of people who said yes, it could happen increased.]

B2: Ingenzeka.

[It can happen.]

S: Yes?

[Yes?]

B2: Ndicela ukuphendula mna bhuti wam le ndawo. Mna ndiyangqinelana naba bathi ingenzeka nam ndiyayivumela ukuba ingenzeka loo nto leyo, uyabona? But it would be difficult because some of us esingamaxhosa asisazi kakuhle isiXhosa, bona? And abanye bethu abafundanga siXhosa eHigh school only ePrimary ingenzeka yona qha ingaba nzima.

[May I please answer this part, my brother. I was one of the people who said yes, it could happen. But it would be difficult because there are some of us who are isiXhosa speakers who do not know isiXhosa very well, you see?.. And some of us did not do isiXhosa in all our High school years, some only in Primary. So it is possible but it could be difficult.]

S: Oh, ingaba kukhona omnye ofuna ukongeza or onayo into, mhlawumbi ...em...em....andifuni kuthi enxamnye but ke something edifferent kunale

[Oh, is there anyone who wants to add...em..em...I do not want to say something different but something contrary to what the lady said and maybe shed more light?]

C2: isiXhosa siquzile...isiXhosa. Abantu abaninzi abawa..abazazi iiparts zomntu, or inkomo nokuba yintoni na, iiparts ngesiXhosa. Yenye yento eyenza ingxaki.

[IsiXhosa is very deep (complicated)...isiXhosa. Many people do not...do not know some human parts, or maybe cows whatever it may be, the parts (anatomy) in isiXhosa. That is part of the problem.]

D2: Hayi mna ndinale nto, if..if ibiqale from like apha eYunivesithi, if ibiqale mhlawumbi from first year maybe, mhlawumbi ibinokuba nechange coz ngoku iHUB i...imore like

deeper kwisecond year more than kwifirst year. So, if like besinokuziqhelanisa nayo kuqala kwifirst year ekuqaleni konyaka until ugqibe idegree yakho, I think ibinokuba more effective more than ukuqala ngoku sesiphakathiand kengoku like nesiXhosa sinzima===

[I have this part, if..if this started from like here at the university, if it started maybe from first year maybe, maybe there would be a significant change because now HUB i...is more like deeper in second year more than in first year. So, if like if we were to get accustomed to it during first year at the beginning of the year until you finish your degree, I think it could be more effective more than starting now in the middle of our degree like isiXhosa is difficult===]

E2: IsiXhosa sinzima, isiXhosa sinzima like iingingqi zethu zithetha isiXhosa esingafaniyo. Esikolweni uva igama lesiXhosa elingathethwayo apho uhlala khona===

[IsiXhosa is difficult. IsiXhosa is difficult. Like our areas speak different isiXhosa. In schools, you hear of a certain word that is not used in the area you stay in ===]

F2: Ulwimi lwengingqi

[===Dialect]

B2: IsiXhosa sengingqi

[IsiXhosa dialects]

E2: ewe ulwimi lwengingqi

[Yes, a dialect]

S: I take it that nina ningaba banga bavumelane nesa statement? (pointing to the two gentlemen)

[I take it that you are the ones who did not agree with statement? (pointing to the two gentlemen)]

C2: Mna andisakhumbuli kakuhle but I think even though ingenzeka kodwa...eish, isiXhosa sinzima===

[I, myself cannot remember clearly, but I think even though it is possible...eish, isiXhosa is very difficult===]

E2: ===Sinzima.

[===it is difficult.]

S: Masidlule apho, ndiza kunika omnye because ndifuna naye aphenule. So uquestion 5 uthi "I even doubt that isiXhosa could be developed to such an extent that it could be used for teaching and providing lecture materials in my HUB 228 module." Ya Abantu abaninzi eyona nto indikhwankqisayo yile yokuba abantu abaninzi babesithi ya in fact babebambalwa abantu who said they even doubt but kuthe after ndiprovide le material

abantu abaninzi bathi hay, I doubt seriously, ndafumanisa ukuba lininzi inani labantu abadawuthayo after ndiprovide le material. Eh...it is quite interesting...bendifuna ukuza kula nto ubuza kuyithetha, ubuzakuthini?

[Let us move on then, I will allow another person to have a say because I want to give the opportunity to others. So, question 5 says, "I even doubt that isiXhosa could be developed to such an extent that it could be used for teaching and providing lecture materials in my HUB 228 module." Yes, many people, the most surprising thing, in fact, there were few people who said they even doubt but after I provided the translated material many people said, No, I doubt seriously.... I even discovered that there is a lot of people who are even doubting, even after I provided the material.... Eh...it is quite interesting... I wanted to bring you back to what you were going to say D?]

D2: Bendizokuthi mna kwa esi siXhosa sesiya siquze kakhulu, sesiqhele esi siXhosa njee

[I was going to say, the isiXhosa you used there was very deep (complicated). We are so used to the njee (Translated as simple) isiXhosa===]

G: Esi sixubileyo

[===the mixed one]

D2: Esi sixubileyo

[===the mixed one===]

B2: Sinawo namagama esingakwazi ukuwabeka namagama eEnglish esingakwazi ukuwatranslatha esiXhoseni abe ekhona la amagama, yabo ...em...em akwaziyo ukuguquleka but asikwazi ukuwaguqula...em...em..hay isiXhosa ha.a, sinzima shem

[=== We have words that we cannot put, English words that we cannot translate to isiXhosa and they are there, you see...em...em they are translatale but we cannot translated them ourselves...em...em..no isiXhosa NO, NO, it is difficult shame===]

C2: Especially kwiHUB xa uguqula iHUB to esiXhoseni.

[Especially in HUB, when you are translating HUB to isiXhosa.]

S: Alright, what is also interesting kuyo yonke loo nto leyo yinto yokuba ..eh..kukhona umbuzo othi esiXhosa can be used as the only language for teaching and learning. Bantu abaninzi baye bathi ewe kunjalo i45% iye yathi ewe kunjalo and i54% of post-test yithi ya kunjalo===

[All right, what is also interesting in all this is that...eh...there is a question that says "isiXhosa can be used as the only language for teaching and learning. Many people said yes it could be so about 45% said yes during pre-test it could be so and a 54% of post-test said yes it could be so===]

B2: It can, I agree with that, it can...why not...why not? It can. Like sifundile ukuthetha iEnglish singayazi, asingobelungu singamaXhosa uya-understanda... we learned English...then why not singasifundi isiXhosa. Ha.a no...

[===It can, I agree with that, it can...why not...WHY NOT? It can. Like we have learnt to speak English, we did not know it, we are not English speaking, we are Xhosas. Do you understand?... we learned English...then why not learn isiXhosa as well. NO No...no...]

C2: Siyazingca ngolwimi lwethu

[We are proud of our language]

B2: Sikwazile ukufunda iEnglish singayazi (with a louder emotional voice)

[We have managed to learn English, having not known it]

F2: ===Ewe Nyhani===

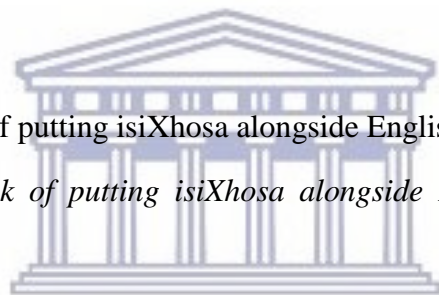
[Yes, really]

S: ===what do you think of putting isiXhosa alongside English zihambe zombini?

[===what do you think of putting isiXhosa alongside English and let them be used together?]

B: Ukuba yenze njani?

[What do you mean?]



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S: So, umbuzo wam uthi, what if isiXhosa sihamba alongside iEnglish endaweni yokuba kuthiwe isiXhosa singasodwa and English ihambe yodwa, xa zihamba zombini nicinga ntoni ngaloo nto?

[My question is, what if isiXhosa could be alongside English instead of, let us say, isiXhosa is on its own or English is on its own.]

B2: Njani?

[How?]

C2: Uthetha ukuba kuxutywe eklasini? Njengolu hlobo sithetha ngalo ngoku?

[You mean, mix them in class like we are doing now?]

S: Either mhlawumbi xube olo hlobo okanye mhlawumbi sifumane let us say iinotes ngeelwimi zombini. Umzekelo, uyakhumbula la intervention, njengokuba kwakukho that video===

[Either, maybe mix it this way or maybe let us say, get notes in both the languages. For instance, do you remember the intervention whereby I brought that video===]

C2: ===Oh! Ewe, ewe===

[===oh! Yes, yes===]

S: Kubekho eza kuba ngesiXhosa and enye ibe ngeEnglish, what do you think ngaloo nto?

[You find that there is one in isiXhosa and one in English. What do you think of that?]

C2: Hayi iright loo nto. Yeyona nto inganceda yona even though nokuba mhlawumbi uphendule ngesilungu but ke ube uyazi ngokweendlela zombini. Yenza isence more than ukuba u-understanda eh..===

[No, that would be alright. It is one thing that could help, even though even, maybe you answer in English but then you know the answer in both ways. That makes sense more than understanding, em...===]

B2: ===icala eliyi-1...ifana nokuba umzekelo siyiunderstanda ngesiXhosa then asiyi-understandi nge-English

[===one side... it is like, for an example, we understand it in isiXhosa then we do not understand it in English]

S: But ndifuna ukuqonda ukuba ingakuvuyisa na loo nto leyo?

[What I want to understand is whether it would make you happy?]

B2: Ewe

[Yes.]

ALL: Hayi ingalunga

[That could work]

S: So yeyona nto ingalunga?

[So, is it the one thing that could help?]

B2: Ewe...Because kukho amagama, kwiHUB, uyabona, kwiHUB kukho amagama amakhulu esingawaziyo ukuba athini ngesiXhosa, umzekelo iincum besingazazi nee...nee..., zintoni kanene ezinye ebezithethwa phaya? Em...===

[Yes, because there are terms in HUB, you see, in HUB big terms that we do not know their meaning in isiXhosa. For instance, the term, iNCUM. We did not know...and...and..., what are the other things that were said there?]

E2: ...izingxobo

[Sacks]

- B2: Ewe, izingxobo, besingazazi ukuba ziintoni ngesiXhosa, sizazi nje only nge-English.
[Yes, sacks, we did not know what they are in isiXhosa, we only know them in English]
- S: Xa ucinga, masithethe ngela gama ubuthetha ngalo lesingxobo solwambesi, xa ucinga wena ngesingxobo solwambesi, ucinga ngantoni wena nanjengomntu othi zange uyive okanye uyicingele?
[When you think of..., let us use that term you mentioned, ISINGXOBO SOLWAMBESI (pericardium sack), what comes to mind when it comes to you as the person who said you never knew]
- C2: Yhoo!
[Wow!]
- S: Xa ungazang' uyive
[Since you have never heard of such]
- B2: Ndingazange ndiyive ukuba iyimayocardial sack?...hahaha
[Since I never heard of it?...hahaha]
- S: Masiqale apha, uyayazi ukuba xa sithetha ngesingxobo ukuba sithetha ngantoni kuqala?
[Let us start here. Do you firstly know what we mean when we talk of ISINGXOBO (sack)?]
- B2: sithetha ngento you kufaka into===
[We refer to something you put something into===]
- C2: ===Ngento yokufaka into...
[===something used to put something into...]
- S: So, awucingi ukuba ela gama lesingxobo solwambesi likunika an idea okokuba yintoni na le enzeka phaya
[So, do you not think that the term, ISINGXOBO SOLWAMBESI (pericardial sack) gives you an idea of what the term refers to?]
- B2: ya, uyayazi ukuba===
[Yes, you know that===]
- C2: Enye into isingxobo uzoku-understand-a ukuba yintoni. Then, kuthethwe ngolwambesi umntu angayazi ukuba yintoni leyo.
[Yes, another thing is that you will understand what ISINGXOBO (sack) is. Then when it comes to ULWAMBESI (pericardium), you do not know what it refers to]

S: kukho abantu abakhe babhala itest ngesiXhosa while...em..kukho ababhale nge-English, ingababakhona apha?

[there are people who wrote the test in isiXhosa while...em... there are those who wrote in English, are they here?]

C2: Ewe, ja=

[yes]

B2: hayi mna khange ndi===

[No, I did not===]

C2: ndingomnye wabantu ababhale ngesiXhosa===

[I am one of those who answered in isiXhosa===]

G: ===Na...Nam ndingomnye wabo.

[Me, me too, I am one of them]

S: masiqale apha, what made ukuba...em...em nichoose ukubhala ngesiXhosa endaweni yesiNgesi?

[Let us start here, then. What made you choose to write in isiXhosa instead of English?]

C2: Eh...mna ndingathi I didn't choose ukubhala ngesiXhosa njee... Bendimane ndijonga nakweli cala le English because amanye amagama esiXhosa bendingekawazi kakuhle even though eh...bendiyijongile la video, So bendi===

[Eh... I can say I did not just simply choose to write in isiXhosa. There were instances where I was going to the English side because I still did not know some terms in isiXhosa even though I did look at the video===]

G: ===besingekawaqheli

[We were not yet used to them]

C2: ===ya besingekawaqheli. Kodwa kuba ke sifuna ukusebenzisa isiXhosa saqonda ukuba, mna phofu ndaqonda ukuba I'm gonna answer ngesiXhosa sakuthi...even though ke amanye amagama bendisa===

[===Yes, we were not used to them. But because we wanted to use isiXhosa, I decided that I am going to answer in our own isiXhosa...even though some terms I===]

G: Bendisawafunda, eh...

[I was still studying them]

S: Nakuwe tata bekunjalo?

[Is it like that to you as well?]

G: ja, enye into anzima la magama nangona avakala emnandi kodwa antsokothile, eh...

[Yes. Another thing is that although these terms sound nice but they are deep, eh...]

B2: (leaving the group)

S: Ok ok... xa sibuyela kweli phepha lemibuzo...em, abantu abaninzi em...kukho umbuzo obukhe wavela ukuba if iHUB singayenza nangesiXhosa, loo nto ingandinyusela nje ngomsebenzi unnecessarily, nicinga ntoni ngaloo nto leyo?

[Ok, ok, going back to the questionnaire...em, many people...em...there is a question that arose which says that if HUB was done in isiXhosa, that would unnecessarily give me too much work. What do you think about that?]

C2: Yenye yeechallenges leyo ngoba ngoku kuza kufuneka wenze idouble job for into eyi1

[That is one of the challenges because now you will have to do a double job for one thing.]

S: So...

[So...]

C2: Which means uza kurequire ixesha elininzi to go through umsebenzi wakho2

[Which means you will require more time to go through your work]

S: kule nto Kanye uyithethayo don't you think ukuba mhlawumbi ukuba ngaba bekusithiwa... kukho lo tata ebekhe wathetha ngento yokuba ukuba ngaba izinto besiziqale kwakwilst year..., The question is would you be willing to improve on isiXhosa sakho in order to adapt to ezi concepts mhlawumbi kuthethwa ngazo?

[On that point you are mentioning, do you not think maybe if it was...there is a point mentioned by one gentleman that if this started during first year..., the question is would you be willing to improve your proficiency in isiXhosa in order to adapt to the concepts mentioned?]

C2: yenye ichallenge but....

[that is another challenge but...]

S: Yes?

[Yes?]

All: Ewe...(quiet)

[Yes]

S: let us say mhlawumbi kuthwe nazi ke ziqalwa kwakwi1st year leyo. Do you think it would be helpful and would you be willing ukuyiqala ngesiXhosa yonke loo nto ukwenzela okokuba uzokuyi understand-a yonke loo nto neza concepts ubusithi zinzima?

[Let us say for instance, this starts in your first year. Do you think it would be helpful and would you be willing to start everything in isiXhosa so that you can understand it better including the concepts you were saying are difficult?]

C2: Ndicinga ukuba ingalunga mna because uzokube ufika mos. Umzekelo,...let us say istudent esifikayo esitsha, esiseyi1st year, umzekelo siyafika. Ubungekazifamiliarize-I ngezinto zeEnglish zeHUB ukuba iHUB ititshwa ngeEnglish, ufike iHUB ititshwa ngesiXHosa from first year, then obviously uzokungena esiXhoseni because obviously uzokufunda ngesiXhosa ude ugqibe idegree yakho whereas ngoku thina besesifunda ngeEnglish kwasekuqaleni then yatshintshwa sazama ukutshintsha ukusebenzisa le ndlela ubuze ngayo wena. Then kwabanzima kuthi because asiqalanga ngayo kwasekuqaleni. Sivele sayibamba phakathi. If besiqale ngayo ekuqaleni ngqa, ibinokwazi, I think ibinokuphumelela kakhulu.

[I think that would be fine because it is your new year at the university. For instance...let us say it is a new student doing first year, it is the student's first time at the university. The student is not yet familiar with HUB in English, that HUB is in English, the student might find HUB taught in isiXhosa from first year. Then, obviously, the student is likely to choose isiXhosa version because obviously, you will learn everything in isiXhosa until you finish your degree whereas now, we are already taught in English from the beginning and you came and we tried to adapt to the way you brought it to us. Then, it became difficult to us because we did not start with it from the beginning. We got it in the middle. Had we started with it in the beginning, I think, it would have been very successful.

S: Alright, nanku omye umbuzo, masithi kuyiva kwiimviwo, kuyokubhalwa. Unikwe isiXhosa unikwe nesiNgesi which one would you choose if bekusithiwa naseklasini uzenze zoy2 ngesiXhosa nesiNgesi?

[All right, here is another question. Let us say we are writing exams and you are given isiXhosa version and also given the English one, which one would you choose to write if you did your module in both IsiXhosa and English?]

C2: Hayi mna ndingakhetha isiXhosa, xa uzenze zoyi2 Hayi ndingakhetha isiXhosa

[No, for me, I would choose isiXhosa if you did both in class. No, I would choose isiXhosa]

D2: NgesiXhosa nesiNgesi?

[In isiXhosa and English?]

S: Mhm.mhm

[Yes]

D2: Hayi, ndingakhetha isiXhosa,

[No, I would choose isiXhosa]

G: Ndingakhetha isiXhosa (smiling)

[I would choose isiXhosa]

S: Alright, eyona nto inganenza ningasikhethi isiXhosa kukuba ngaba le nto ubuyenze ngesiXhosa but xa kufuneke uyiphendule ngesiNgesi?

[So, what would make you not to choose isiXhosa is because you may have done it in English but given an option of answering in isiXhosa?]

C2: mh.mh (nodding)

[Yes]

S: Now how about ke ngoku if bekusithiwa le nto uyenze, let us say ngesiXhosa.... Now kuthiwe yiphendule ngeEnglish or vs how would that make you feel, would you be prepared to?

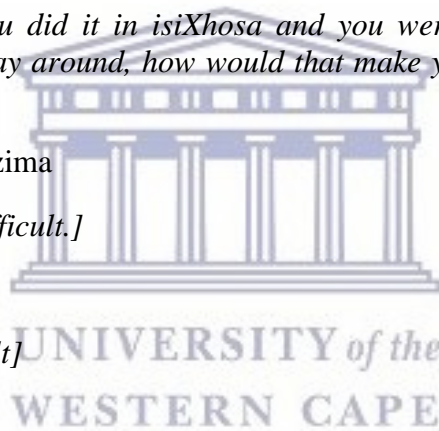
[Now, how about if you did it in isiXhosa and you were asked to answer everything inEnglish or another way around, how would that make you feel and would you also be prepared to?]

C2: yhoo! Hayi ibizakuba nzima

[Wow, that would be difficult.]

G: Iza kuba nzima

[It is going to be difficult]



APPENDIX VI

QUESTIONNAIRES

My name is Sabelo Sawula, a Master's student in the Department of Linguistics, UWC. For my research, I require data on issues around the use of isiXhosa in teaching and learning at the university. I would be grateful if you would kindly complete the questionnaire below as honestly as possible. I can assure you of the confidentiality of your responses. Please do not write your names or your student number. If you have questions or need clarity in any of the statements, please ask me. Thank you for your time.

Background information

A. Your age bracket (please tick in the corresponding box)

Between 17-20 Between 21-24 Between 25 and older

B. Gender: M F

C. Place where you grew up: Rural Urban (EC) Township Suburb WC Other

D. Please rate yourself your proficiency in isiXhosa and English using the following scale:

1 = very poor; 2 = poor; 3 = fair; 4 = good; 5 = very good

Language:	Write		Language:	Write	
English	Read		IsiXhosa	Read	
	Speak			Speak	
	Understand			Understand	

E. Which variety of isiXhosa are you more fluent in: Deep isiXhosa Urban isiXhosa

F. Main language of instruction in Primary school was: _____

G. Main language of instruction in Secondary school was: _____

H. If not Xhosa in Secondary school, did you study Xhosa as an additional subject? No Yes

1. IsiXhosa cannot be used as language of teaching and providing lecture materials in university course in the sciences.

Strongly Agree Agree Indifferent Disagree Strongly Disagree

N

2. English is the only language that is suitable for use in teaching and providing lecture material in my HUB 228 module at university

Strongly Agree Agree Indifferent Disagree Strongly Disagree

3. IsiXhosa may be suitable for university courses in the Arts and Social Sciences, but not in the sciences.

Strongly Agree **Agree** **Indifferent** **Disagree** **Strongly Disagree**

4. Even if it were possible to use isiXhosa for teaching and providing lecture materials in my HUB 228 module, that could not happen now. It would take a very long time for the language to be developed, before it could be used.

Strongly Agree **Agree** **Indifferent** **Disagree** **Strongly Disagree**

5. I even doubt that isiXhosa could be developed to such an extent that it could be used for teaching and providing lecture materials in my HUB 228 module.

Strongly Agree **Agree** **Indifferent** **Disagree** **Strongly Disagree**

6. If isiXhosa were used for teaching and providing lecture materials in my HUB 228 module, such use would not give me any advantage.

Strongly Agree **Agree** **Indifferent** **Disagree** **Strongly Disagree**

7. I would understand my HUB 228 module better and perform better in assessment tasks if isiXhosa were used in addition to English for teaching and providing lecture materials in the module.

Strongly Agree **Agree** **Indifferent** **Disagree** **Strongly Disagree**

8. IsiXhosa can be used as the only language for teaching my HUB 228 module.

Strongly Agree **Agree** **Indifferent** **Disagree** **Strongly Disagree**

9. IsiXhosa can be used with English in teaching my HUB 228 module.

Strongly Agree **Agree** **Indifferent** **Disagree** **Strongly Disagree**

10. I would like isiXhosa to be used as one of the languages for teaching and for providing lecture materials for my HUB 228 module

Strongly Agree **Agree** **Indifferent** **Disagree** **Strongly Disagree**

11. If isiXhosa were used as one of the languages of teaching and providing lecture materials in my HUB 228 module, I would understand the material better just because I am isiXhosa speaker.

Strongly Agree **Agree** **Indifferent** **Disagree** **Strongly Disagree**

12. If isiXhosa were used of the languages of teaching and providing lecture materials in my HUB 228 module, it would not be easy for me to readily understand it, even though I am an isiXhosa speaker. I would have to learn the language better. is only good for cultural stuff.

Strongly Agree **Agree** **Indifferent** **Disagree** **Strongly Disagree**

13. I would not at all like isiXhosa to be used as one of the languages of teaching and for providing lecture materials for my HUB 228 module.

Strongly Agree **Agree** **Indifferent** **Disagree** **Strongly Disagree**

14. If I had a child who wanted to take the HUB 228 module, I would not want isiXhosa to be used as one of the languages for providing lecture materials or for teaching the child

Strongly Agree **Agree** **Indifferent** **Disagree** **Strongly Disagree**

15. It would make me very happy to see my home language being used to teach HUB 228.

Strongly Agree **Agree** **Indifferent** **Disagree** **Strongly Disagree**

16. Using isiXhosa as one of the languages for teaching and providing lecture materials in HUB 228 would unnecessarily increase my workload.

Strongly Agree **Agree** **Indifferent** **Disagree** **Strongly Disagree**

17. I just don't want isiXhosa being used for academics.

Strongly Agree **Agree** **Indifferent** **Disagree** **Strongly Disagree**

18. If I had a choice between a class that was taught only in English and another that was taught in both isiXhosa and English, I would attend only the English class.

Strongly Agree **Agree** **Indifferent** **Disagree** **Strongly Disagree**

19. I am prepared to experiment with the idea of being taught and receiving lecture materials in my HUB 228 module in isiXhosa.

Strongly Agree **Agree** **Indifferent** **Disagree** **Strongly Disagree**

20. I would be willing to contribute to the development of lecture materials in isiXhosa in my HUB 228 module in isiXhosa.

Strongly Agree **Agree** **Indifferent** **Disagree** **Strongly Disagree**

21. If I had to improve my knowledge of isiXhosa, so as to be able to better understand lecture materials in isiXhosa, I would be willing to learn isiXhosa better.

Strongly Agree **Agree** **Indifferent** **Disagree** **Strongly Disagree**

22. If isiXhosa were used as one of the languages for teaching and learning in my department, I would be willing to be a tutor conducting tutorials for students who have isiXhosa as home language.

Strongly Agree **Agree** **Indifferent** **Disagree** **Strongly Disagree**

23. I am prepared to receive examination questions in both isiXhosa and English even if I have to answer in English.

Strongly Agree **Agree** **Indifferent** **Disagree** **Strongly Disagree**



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APPENDIX VII

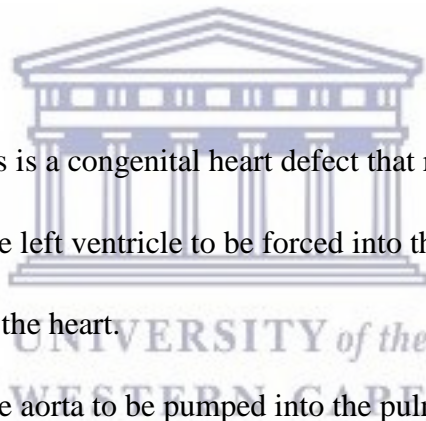
TEST QUESTIONS

Question relating to Lecture 1

1. The cardiac nerve contains the axons of
 - a) sympathetic preganglionic neurons.
 - b) sympathetic postganglionic neurons.
 - c) parasympathetic preganglionic neurons.
 - d) parasympathetic preganglionic neurons.
 - e) All of the above.

2. Patent ductus arteriosus is a congenital heart defect that results in
 - a) oxygenated blood in the left ventricle to be forced into the right ventricle.
 - b) increased workload on the heart.
 - c) oxygenated blood in the aorta to be pumped into the pulmonary trunk.
 - d) the backflow of blood into, for example, from the aorta into the left ventricle.
 - e) the narrowing of a heart valve.

3. The coronary sulcus is a groove that
 - a) marks the border between the atria and ventricles
 - b) marks the boundary line between the right and left ventricles
 - c) marks the boundary line between the right and left atria
 - d) separates the atrioventricular valves from the atria
 - e) separates the coronary arteries from the coronary veins



4. The function of the pericardium includes

- a) preventing expansion of the heart
- b) pumping blood into circulation
- c) removing excess fluid from the heart chambers
- d) anchoring the heart to surrounding structures
- e) both A and D

5) Choose which one of the following bony landmarks you would use to visualise the boundary between the superior and inferior mediastinum.

- a) midsternal line
- b) left 5th intercostal space
- c) right 2nd intercostal space
- d) sternal angle
- e) midclavicular line



6) Choose which one of the following conditions is characterized by inflammation of the serous pericardium.

- a) pericarditis
- b) pneumopericardium
- c) pericardial effusion
- d) angina pectoris
- e) cardiac tamponade

7) When the space between the parietal and visceral pericardial layers is filled with air, this condition is known as

- a) pericarditis
- b) pneumopericardium
- c) pericardial effusion
- d) patent ductus arteriosus
- e) cardiac tamponade

8) The great and middle cardiac veins carry blood from the cardiac muscle, drains into the coronary sinus, which opens into the

- a) left atrium
- b) left ventricle
- c) right atrium
- d) left ventricle
- e) superior vena cava



9) Choose which of the following is not located within the mediastinum

- a) thymus
- b) right lung
- c) trachea
- d) phrenic nerve
- e) pericardium

10) The right atrium receives blood from the

- a) pulmonary veins
- b) pulmonary trunk
- c) aorta
- d) inferior vena cava
- e) arteriosus



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