

**TITLE OF STUDY**

**VOCATION-SPECIFIC ISIZULU LANGUAGE  
TEACHING AND LEARNING FOR MEDICAL STUDENTS  
AT THE UNIVERSITY OF KWAZULU-NATAL**

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## **PURPOSE OF STUDY**

This study was carried out in partial fulfilment (96 credits) of the requirement for the degree of Master of Public Health at the School of Nursing and Public Health, College of Health Sciences, University of KwaZulu-Natal, Durban, South Africa.

## TABLE OF CONTENTS

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<b>CHAPTER ONE: INTRODUCTION</b> .....	<b>1</b>
1.1 INTRODUCTION.....	1
1.2 BACKGROUND.....	3
1.3 PROBLEM STATEMENT .....	10
1.4 AIMS AND OBJECTIVES.....	11
1.5 SUMMARY & STUDY OUTLINE .....	13
<b>CHAPTER TWO: LITERATURE REVIEW</b> .....	<b>15</b>
2.1 INTRODUCTION.....	15
2.2 LANGUAGE & CULTURAL BARRIERS AND THEIR EFFECTS ON HEALTH CARE .....	16
2.3 RESEARCH IN COMMUNICATION AND ITS TEACHING.....	18
2.4 THEORETICAL CONSTRUCTS RELEVANT TO THE STUDY.....	23
2.5 SUMMARY .....	29
<b>CHAPTER THREE: METHODS</b> .....	<b>31</b>
3.1 INTRODUCTION.....	31
3.2 RESEARCH DESIGN .....	31
3.3 DATA SOURCES.....	32
3.4 MEASURES TO ENSURE VALIDITY OF DATA .....	36
3.5 DATA COLLECTION.....	39
3.6 DATA MANAGEMENT .....	39
3.7 SUMMARY OF RESEARCH .....	42
3.8 ETHICS .....	43
3.9 WORK PLAN .....	43
3.10 SUMMARY .....	44
<b>CHAPTER FOUR: RESULTS</b> .....	<b>45</b>
4.1 INTRODUCTION.....	45
4.2 DESCRIPTIVE STATISTICS .....	46
4.3 ANALYTIC STATISTICS .....	49
4.4 SUMMARY .....	64
<b>CHAPTER FIVE: DISCUSSION</b> .....	<b>65</b>
5.1 INTRODUCTION.....	65
5.2 DISCUSSION .....	65
5.3 SUMMARY .....	73
<b>CHAPTER SIX: CONCLUSION &amp; RECOMMENDATIONS</b> .....	<b>74</b>
6.1 INTRODUCTION.....	74
6.2 OUTCOME OF STUDY.....	74
6.3 RECOMMENDATIONS .....	74
6.4 SUMMARY .....	84

## **SUPERVISORS' PERMISSION TO SUBMIT FOR EXAMINATION**

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As the candidate's supervisor, I agree to the submission of this dissertation for examination.

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## DECLARATION

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I, Margaret Matthews (207524495), declare that:

- (i) The research reported in this dissertation, except where otherwise indicated, is my original research.
- (ii) This dissertation has not been submitted for any degree or examination at any other university.
- (iii) This dissertation does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons.
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  - b) Where their exact words have been used, their writing has been placed inside quotation marks, and referenced.
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Date:

## **DEDICATION**

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I wish to dedicate this study to the memory of my father, Dr John Matthews, a fluent isiZulu linguist who was loved and respected by his patients and who taught me how important it is to communicate with patients in their mother tongue.

## ACKNOWLEDGEMENTS

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## LIST OF TABLES

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<b>TABLE 1:</b> PROGRAMME SUMMARY OF ISIZULU TEACHING AND ASSESSMENT IN THE MBChB PROGRAMME AT UKZN IN 2010-2012 .....	9
<b>TABLE 2:</b> SUMMARY OF RESEARCH OBJECTIVES, TYPE OF DATA, SAMPLE SIZE, DATA COLLECTION TOOLS, AND TYPE OF ANALYSIS USED IN STUDY .....	42
<b>TABLE 3:</b> PROFILE OF STUDENTS IN STUDY POPULATION AT THE NRMSM IN 2012 (N=61)....	47
<b>TABLE 4:</b> LANGUAGE COMPETENCE – ENGLISH, AFRIKAANS, OTHER - STUDENTS’ OWN RATINGS (N=61).....	48
<b>TABLE 5:</b> WRITTEN TEST RESULTS FOR COHORT – 2010 AND 2012 .....	50
<b>TABLE 6:</b> ISIZULU LANGUAGE COMPETENCE – STUDENTS’ OWN RATINGS IN 2012 (N=61) ....	51
<b>TABLE 7:</b> MEASUREMENTS OF CENTRAL TENDENCY: ATTITUDE SCORES FOR COHORT IN 2012 .....	52
<b>TABLE 8:</b> MEASUREMENTS OF CENTRAL TENDENCY: PRACTICE SCORES FOR COHORT IN 2012 .....	55
<b>TABLE 9:</b> EXPERIENCES OF COHORT (N=53) CONCERNING ISIZULU T&L IN THE MBChB PROGRAMME .....	58
<b>TABLE 10:</b> RECOMMENDATIONS OF COHORT (N=48) CONCERNING ISIZULU T&L AND ASSESSMENT IN MBChB PROGRAMME .....	61
<b>TABLE 11:</b> SUMMARY OF PROPOSED STRATEGIES FOR T&L AND ASSESSMENT OF <i>ISIZULU</i> IN MBChB PROGRAMME & RATIONALE FOR THE PROPOSAL .....	83

## LIST OF FIGURES

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<b>FIGURE 1: FREQUENCY DISTRIBUTION OF LIKERT SCALE (MEAN) FOR ATTITUDE FOR COHORT (N=61)</b> .....	54
<b>FIGURE 2: FREQUENCY DISTRIBUTION OF LIKERT SCALE (MEAN) FOR PRACTICE FOR COHORT (N=61)</b> .....	57

## ABBREVIATIONS & DEFINITIONS

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**BICS:** Basic interpersonal communicative skills: This term is commonly used in the discussion of bilingual education and arises from the early work of Cummins (1984) in which he demonstrated two main continua of second language development, with BICS referring to the development of conversational fluency.

**CALP:** Cognitive academic language proficiency: This term is similarly used in the discussion of bilingual education and arises from the early work of Cummins (1984) in which he demonstrated two main continua of second language development, with CALP describing the use of the language in decontextualized academic situations in which higher order thinking is required.

**CALL:** Computer assisted language learning

**CanMEDS Framework:** Canadian Medical Education Directives for Specialists

**CHS:** College of Health Sciences

**CLT:** Communicative Language Teaching

**Communicative competence:** the term communicative competence is frequently used in this study instead of language proficiency. It refers to medical students' ability to communicate with patients in an everyday clinical situation, as opposed to full language proficiency.

**Cultural competence:** the term cultural competence in health care has emerged partly as a strategy to address disparities in health care which may result from racial, ethnic and language differences. In this study, it refers to medical students' ability to demonstrate appropriate knowledge, attitude and behaviours to enable them to effectively manage diverse patient populations. Whilst not included in this study's specific objectives, it is mentioned as an aim for future curriculum development.

**HCW:** Health care worker

HPCSA: Health Professions Council of South Africa

KAP: Knowledge, Attitude and Practice

KZN: KwaZulu-Natal

L2: Second language (refers to any language in addition to a person's first language and can include third, fourth or subsequent languages).

LEP: Limited English Proficiency

LoLT: Language of Learning and Teaching

LSP: Language for Specific Purpose

MChB: Bachelor of Medicine Bachelor of Surgery

NRMSM: Nelson R. Mandela School of Medicine

OSCE: Objective Structured Clinical Examination

PanSALB: Pan South African Language Board

Proficiency test: This is a written test done by first year students on entering the medical school. Students who fail the test are required to do a year-long isiZulu module. No studies have been done to relate this test to communicative competence or functional proficiency to carry out their duties as medical students or medical practitioners. For the purpose of the study, other than in the term CALP, proficiency has been used to refer to written ability in isiZulu or to functional proficiency in a clinical setting.

RSA: Republic of South Africa

SA: South Africa

Selectives: A term used for three community-based modules which introduce learners to the principles of community-based health care and family medicine through experiential learning opportunities (in the second, third and fourth years of the programme).

SLA: Second Language Acquisition

Simulated/ standardised patient: A healthy person who is trained to realistically and accurately reproduce a history or a medical scenario that a real patient would present, in a standardised manner for examination purposes.

TBLT: Task-Based Language Teaching

T&L: Teaching and Learning

UCT: University of Cape Town

UKZN: University of KwaZulu-Natal

WHO: World Health Organisation

## ABSTRACT

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### **Introduction**

Being an effective communicator is a core competency required of all health care practitioners. Some undergraduate medical students at the Nelson R. Mandela School of Medicine (NRMSM), University of KwaZulu-Natal, Durban, are unable to communicate in isiZulu, the mother tongue of nearly 80% of the 10.2 million people in the province, and the most common home language spoken in South Africa. A one-year isiZulu course to teach communicative competence in the language, and assessed in the first three years of the 6-year MBChB programme, is currently offered at the first year level to medical students.

### **Aim**

This study was conducted in 2012 to assess how isiZulu clinical communication was perceived by a third year cohort of medical students, and whether current teaching in the period 2010-2012 had prepared them to communicate with their patients.

### **Methods**

An observational, cross-sectional study design was used to assess the knowledge, attitude and practice of the study group through a self-completed questionnaire. Their knowledge of isiZulu was assessed in a written test, and the students' marks were compared with their marks in 2010. Oral competence was assessed in an isiZulu history-taking station in the objective structured clinical examination. Students' comments on their experiences and their recommendations were recorded. Ethics approval was obtained to conduct the study, and informed consent was obtained from participants.

### **Results & Discussion**

Medical students' competence in isiZulu had improved. They were largely positive about learning the language of their patients but seldom used the language in the clinical setting. Many students indicated that the current teaching of isiZulu in the programme was inadequate for their needs.

## **Conclusion & Recommendations**

Although isiZulu is taught to non-isiZulu students, this does not convert into an ability to use the language in the clinical setting. In order for medical students to acquire a satisfactory and safe level of communicative competence in isiZulu, and in line with the UKZN Language Plan to emphasize language training specific to various vocational groups, it is recommended that the teaching, learning and assessment of isiZulu language and culture be integrated into all levels of the undergraduate medical programme in the form of vocation-specific isiZulu for medical students.

**(Word count 358)**

# CHAPTER ONE

## INTRODUCTION

### 1.1 INTRODUCTION

Language and cultural barriers present a major challenge to the delivery of effective health care on a global scale. Evidence suggests that differences in language between health care providers and their patients may contribute to health disparities in respect of outcomes such as access to health care, disease incidence and health outcomes (Betancourt, Green, Carrillo and Ananeh-Firempong, 2003). Research has further related language and cultural competence to improved patient satisfaction, quality of care and improved health outcomes. (Betancourt, 2003; Goode, Dunne and Bronheim, 2006; Betancourt and Green, 2010; Reardon, 2012).

In South Africa (SA), and regionally in KwaZulu-Natal (KZN), the ability to communicate effectively with patients in their mother tongue is vital from an individual and public health perspective. It is especially important in health promotion and to ensure adherence to treatment, and should contribute to improved health outcomes at both individual and public health levels in the province.

This study aims to contribute to a better understanding of isiZulu clinical communication teaching and learning (T&L) in the Bachelor of Medicine and Bachelor of Surgery (MBChB) programme at the Nelson R Mandela School of Medicine (NRMSM), by analysing the knowledge, attitude and practice (KAP) of a cohort of third year students in 2012. The study provides information about the students' communicative competence and use of *isiZulu* in the clinical setting, and analyses some of their beliefs and perceptions about the use of *isiZulu*. In addition, students' experiences and recommendations are recorded. It is beyond the scope of the study to analyse patient perspectives and health outcomes, which are complex issues that require further analysis in the future.



The study has been conducted in my role as Head of Clinical Skills teaching at the medical school. In my work in this area, I have been tasked with developing communication teaching to medical students. Prior to this, in the course of my clinical career as a general practitioner, I have worked both in urban and rural settings, where I spent many years in rural general practice and frequently treated monolingual isiZulu speakers. In these contexts, I worked with interpreters and nurses as interpreters, and also with colleagues who were fluent in isiZulu and who communicated extremely well with their patients. I have no formal training in isiZulu but had spoken some isiZulu from childhood. Through working in clinics and general practice, I became proficient in isiZulu for the clinical interview, and mostly prefer to conduct clinical interviews with patients myself. As such, I am extremely aware of the benefits of being able to communicate directly with patients in their mother tongue. My experience is that this ability improves the quality of doctor-patient communication, as well as the professional relationship, and reduces the problems associated with the use of interpreters. It also allows one to recognise one's limitations and call for assistance from an interpreter when necessary in the interests of patient safety.

As such, I have actively encouraged students to revisit and reinforce the isiZulu content of the first year to bridge the gap between the module and the use of the language in the clinical years. In an attempt to reinforce learning, I introduced an assessment in isiZulu (more fully discussed in section 1.2.3) in the form of a simple history-taking scenario in the second and third years of the MBChB programme. I feel that my background, experience and knowledge have been an advantage, and that my insights and enthusiasm contribute positively to curriculum development.

My academic position does not involve the teaching of isiZulu. This study was also not intended as a curriculum review, which of necessity would involve teachers and experts in the relevant disciplines of isiZulu and Applied Linguistics. Instead, it is a snapshot view of the students' knowledge, attitude and practice, together with experiences and recommendations, the results of which should contribute to generating discussion around the necessity for curriculum development and research into vocation-specific isiZulu for medical students.

## 1.2 BACKGROUND

### 1.2.1 South Africa and its Languages

SA is a multilingual country, with 11 official languages and numerous other spoken languages. IsiZulu, isiXhosa, siSwati and isiNdebele collectively comprise the group of languages known as the Nguni languages, and have many similarities. Collectively, these languages are spoken by 43.3% of the country's population (Statistics SA, 2011), emphasising their importance. Currently, the orthographies of the related languages are undergoing harmonisation in an attempt to standardise the written forms and make them accessible to a wider audience. Simultaneously, specialised terminology and grammatical descriptions are being developed to support a drive to intellectualise African languages in SA (Prah, 2013).

English is regarded as the *lingua franca* of the country, defined as a working or bridge language used to facilitate communication between people who do not share a common mother tongue or home language. However, as a language spoken at home, English accounts for only 9.6% of the total South African population, whilst isiZulu is the most common language spoken in SA, accounting for 22.7% of the population, followed by isiXhosa (16%) and Afrikaans (13.5%) (Statistics SA, 2011).

With regard to provincial variations, isiZulu is the most common language in KZN, at 77.8% in Census 2011. It is also the most frequently spoken language in Gauteng (although there it is spoken by only 19.8% of the population), and is spoken commonly in Mpumalanga (where it is spoken by 24.1% of the population) (Statistics SA, 2011).

Whilst many South African children are currently exposed to a multilingual environment from birth (Ellis, 2008), and many isiZulu-speakers have gained proficiency in speaking English or other languages, this is not necessarily the case for some. Census 2011 revealed that only about half of the country's people are able to speak English (Statistics SA, 2011). Many monolingual patients in KZN, such as those in the older age group or patients from remote or rural areas, use isiZulu as their only means of communication.

The Constitution of South Africa, 1996, in the Bill of Rights (Chapter 2, Section 30) states that everyone has the right to use the language and to participate in the cultural life of their choice (Constitution of the Republic of South Africa, 1996). Other important pieces of legislation in language rights in South Africa are the Commission for the Promotion and Protection of the Rights of Cultural, Religious and Linguistic Communities (CPPRCRLC) Act (2002), and the PanSALB (Pan South African Language Board) Act (2011). The vision of the CPPRCRLC is to establish a nation that protects and promotes the cultural, religious and language rights of all its communities. The PanSALB Act, also referred to as the South African Language Act, aims specifically to promote the use and development of indigenous languages. The KwaZulu-Natal Provincial Languages Bill, 2012, includes, as official languages of KZN, isiZulu, isiXhosa, English, and Afrikaans. It further stresses that regional languages should enjoy parity of esteem and be treated equitably (KwaZulu-Natal Provincial Languages Bill, 2012). Thus legislation, from the Constitution and the national to the regional level in South Africa, provides a strong framework to support institutional policy and the development of African languages at all levels.

### **1.2.2 Communicative Competence for Medical Students**

English is the medium of instruction at the NRMSM. With isiZulu being the indigenous language spoken by nearly 80% of the 10.2 million people in KZN, it should be emphasised that communicative competence in isiZulu is necessary for effective communication with patients for medical students trained here. It is further necessary that undergraduate students attain a minimum level of communicative competence while enrolled in the MBChB programme, as part of their experiential learning occurs while they rotate through various clinical rotations in local hospitals and in rural health locations while engaged in community based projects in the Selectives (see definition) and the rural attachment in the current final year. Thereafter, in internship, and ultimately in community service, communicative competence is equally, if not more, important, for young doctors from whom a high level of professional responsibility is expected as they work (often unsupervised) in rural locations.

Based on my personal experience, problems relating to communication in health care have traditionally been addressed through the use of intermediaries or interpreters. However, in the resource-constrained public service in South Africa, interpreters are seldom available in reality. As a result, nursing staff or other students are often asked to interpret during the

medical interview. However, such individuals are often under pressure to perform their own core functions, and may be unwilling (or unable, by virtue of their own language abilities in our increasingly multilingual context) to act as interpreters for medical students and doctors.

Many students who register for the MBChB programme at this medical school do so with limited or no proficiency in isiZulu. Some students have been exposed to the language at school, while others (foreign or local students) have had very limited or no prior exposure to isiZulu. Furthermore, South Africa's political history of segregation contributed significantly to the lack of integration and exposure to different languages, which has made effective communication in the health care setting very challenging.

The Language Policy and Language Plan (2006) of the University of KwaZulu-Natal (UKZN) are informed by the Higher Education Act of 1997. The UKZN Language Board has highlighted an urgent need to implement this policy and plan and integrate the teaching and use of isiZulu language skills across all programmes offered at the university. The policy and plan emphasize, *inter alia*, the following important points:

- 1) There is a need to “preserve and promote respect for, and proficiency in, the languages referred to in the Constitution”;
- 2) There must be development “of awareness of multilingualism through an acknowledgement of all the official languages of [KZN], namely isiZulu, isiXhosa, English and Afrikaans”; and
- 3) There must be professional provision of subject-specific content for undergraduate students (UKZN, 2006).

Major guiding principles in the policy include the importance of language “as a custodian of culture, heritage, and tradition and as a means of communication”. With reference to multilingualism, the policy also stresses “the active cultivation of respect for diversity in language and culture” (UKZN, 2006).

The NRMSM currently attempts to address some of these aims in the MBChB programme through the teaching of the isiZulu module in the students' first year of study and the additional interventions in the second and third academic years as described below in Section 1.2.3.

### **1.2.3 Pedagogy & Background to Teaching and Learning of isiZulu in the MBChB programme at the NRMSM**

#### **First Year MBChB**

The formal teaching of isiZulu in the MBChB programme started as a single isiZulu module in the first year of study. This module was initially offered by the Department of isiZulu. It comprised a general isiZulu course and used mainly didactic methods to teach isiZulu in a traditional grammar-translation approach. Minimal emphasis was given to the language necessary for the clinical consultation. Student feedback indicated that the approach failed to translate into the students' ability to communicate with patients in the clinical setting.

The appointment of an isiZulu tutor in 2010 in the previous Faculty of Medicine enabled the development of a module that concentrated on the use of a more communicative language teaching methodology for clinical isiZulu. The module included some basic grammar, and placed a strong emphasis on communication, specifically on communication with patients in a health care setting.

In 2010, the medical school changed its curriculum from a 5 to a 6 year programme (referred to as the "new" curriculum), and a clinical communication course (offered in English) was introduced as part of the first year module, Becoming a Professional (CMEDICPM0). This course is based on the Calgary-Cambridge Guide to the Medical Interview (Silverman, Kurtz and Draper, 2005) and stresses a patient-centred clinical method. Students are taught a structured approach to the medical interview which incorporates the biomedical, contextual and patient perspectives. Students explore general and specific communication issues under the guidance of a trained facilitator in interactions with simulated patients who are trained in clinical scenarios. A similar and simplified method which employed simulated/ standardised patients, using mother tongue isiZulu speakers, was successfully implemented for the teaching and assessment of isiZulu in the first year isiZulu module (CMED1ZUM0). This module provides the foundation for the students' professional language requirements and the basic framework for the clinical interview in isiZulu.

Some methods used for isiZulu language teaching will be discussed in Chapter 2. These methods concentrate on conversing in the target language and emphasise the communication requirements of specific situations. Apart from providing basic interpersonal communicative skills (BICS) (Cummins, 1999) necessary for a clinical encounter (and amplified upon in section 2.4.2), the methods used in teaching and learning of the language emphasise a more conversational and practical approach to maximise communication during the clinical consultation with an isiZulu-speaking patient.

### **Second and Third Year MBChB**

Prior to 2011, there was no teaching of isiZulu in the second and third years of the MBChB programme. There is no isiZulu module in this phase, which leads to a break in continuity for students, who therefore would not have the opportunity to practice isiZulu language skills during this phase. For this reason, in spite of the gains obtained through the more practical approach to acquisition of language skills in the first year, concern has been raised that the benefits of the course would probably be lost by the time that students come into contact with patients in their third year of study. In fact, the students themselves, as well as clinical teachers, indicated the need for improved isiZulu language skills in the subsequent years of full-time clinical study. This information was conveyed in verbal communication between the coordinator of the third year Clinical Methods course, the students, and the isiZulu tutor at the medical school.

The need for further training was addressed in 2011 and continued into 2012 with the introduction of support for isiZulu in the second (and subsequently the third) year of study. This was intended to build on the gains of the first year by integrating some isiZulu into the existing modules of the second and third years as part of the students' clinical communication skills training.

The support offered included specific isiZulu content in the form of vocabulary and phraseology relevant to the systems being studied and delivered via the computer-based student learning management system, accessed on <http://learning.ukzn.ac.za/> i.e. Moodle. As well as biomedical terminology, a limited amount of general vocabulary and phraseology was included to assist the students with some questions about the patient perspective. The content was designed, compiled and checked jointly by the Clinical Skills and isiZulu lecturers. As

with most general course material, it was not subjected to a verification process, as, at the time, this process had not become a requirement for teaching material in isiZulu.

Students use self-study and also voluntarily attend tutorials to master this content.

Assessment of students' basic communicative competence in isiZulu is then achieved through a history-taking station in the Objective Structured Clinical Examination (OSCE), using standardised simulated patients. Such assessments take place once a semester in the second and third years (refer to the programme summary in Table 1 below). Whilst this is not ideal, it has provided an incentive to students to revisit and build on the isiZulu content of the first year. The spiral approach is believed to reinforce past knowledge and increase content-specific new knowledge. The support for and assessment of isiZulu in the second and third years provides a vertical link to the clinical years, when students consult with isiZulu patients.

Assessment in medical education is complex, and many formats are used to assess students' competence in various domains (Epstein, 2007). Ideally, assessment of isiZulu clinical competence when communicating with patients should take place in an authentic clinical setting, but, at this time, no such assessments have been done on medical students at this institution. It was for this reason that the decision was made in this study to use the mark in the OSCE as an indicator of knowledge in students in the 3<sup>rd</sup> Year, in which no other formal instruction or assessment in isiZulu takes place.

**Table 1: Programme Summary of isiZulu Teaching and Assessment in the MBChB Programme at UKZN in 2010-2012**

Year	Module Code	Module Name	Teaching	Assessment
2010	CMED1ZUM0	isiZulu	Formal module	Written and oral
2011	CMED2CRM1	Homeostasis	Resources on Moodle Voluntary tutorials	OSCE station
	CMED2NGM2	Co-ordination, Protection & Control	Ditto	OSCE station
2012	CMED3MNM1	Mental Health & Neuro-musculo-skeletal problems	Resources on Moodle Voluntary tutorials	OSCE station
	CMED3RHM2	Reproductive Health, Blood and AI, Infectious Diseases and AIDS	Ditto	OSCE station

This approach is intended further to contribute to a holistic approach to patient care, in which emphasis is placed on the patient's perspective, including a respect for the patient's language and culture. Course organisers are hoping that mastery of BICS in isiZulu will provide opportunities for improving not only linguistic, but also cultural, competence in learners as they gain confidence in the use of spoken isiZulu.

Whilst this study is concentrated on students' communicative language competence in isiZulu for the clinical setting, the recognition that both language skills and cultural competence are essential to medical students has led course designers (from the Schools of Clinical Medicine and Nursing and Public Health) to explore methods to strengthen the teaching of multiculturalism in the MBChB programme. Issues related to cultural awareness of students are being addressed in current research in the College of Health Sciences. This planned



addition will include highlighting the importance of an understanding of patients' health belief models and the social construction of illness. It will emphasize that the key is to be culturally sensitive in a clinical method which stresses a patient-centred rather than a stereotypical approach to patients. In this method, an exploration of the patient's perspective allows the health care professional to become aware of the patient's culture and how it relates to the patient's illness, using appropriate process skills and sensitive enquiry. In the South African context, the concept of linguistic and cultural safety is expounded by Penn and others in various studies related to communication in health care, particularly in situations relating to patient education and counselling. Important topics addressed are bridging the divide in cultural narratives in multicultural populations (Penn, 2002), the disclosure of HIV status (Penn, 2013), adherence to anti-retroviral treatment (Penn, Watermeyer and Evans, 2011), and the role of interpreters (Penn and Watermeyer, 2012).

### **1.3 PROBLEM STATEMENT**

Certain students enrolled in the MBChB programme at the UKZN are unable to speak isiZulu in the clinical setting. Most of the population in this province is isiZulu speaking, and medical students should be able to communicate in isiZulu when they interact with isiZulu-speaking patients, thus improving doctor-patient communication and the professional relationship.

It is hypothesised that the current isiZulu module offered in the first year is insufficient to equip students with the necessary skills to conduct a medical interview or to counsel patients effectively and safely, and that additional resources should be offered to students to increase competence in isiZulu and enable effective communication in the clinical setting.

This problem is important as isiZulu is the home language of nearly 80% of the 10.2 million people in the province, and the commonest home language in SA. To become competent clinicians, medical students should be able to conduct an effective medical interview in isiZulu, both in terms of gathering information about patients' medical histories, and in terms of developing a collaborative management plan. This is vital to prevent dangerous medical mistakes caused by inadequate communication or miscommunication of information due to poor language use. It is also necessary to address important issues in health care such as

health promotion and treatment adherence. The latter is particularly important with reference to the use of chronic medication such as anti-retroviral and anti-tuberculous treatment, and in the management of chronic non-communicable diseases such as hypertension. These are significant health problems in this province so treatment adherence is extremely important to improved individual and public health outcomes.

Results from this study will provide feedback from students for course designers to improve isiZulu clinical communication teaching and learning in medical students, and will generate further discussion on this topic.

The ability of health care workers (HCWs) to speak isiZulu will benefit mother-tongue isiZulu patients in the region and is likely to improve patient satisfaction, patient safety and health outcomes. It is anticipated that providing students with the necessary skills to interact in a linguistically and culturally appropriate way would ultimately result in improved professional satisfaction and better retention of doctors in underserved rural settings of KZN. Improved proficiency in isiZulu is also likely to impact positively on inter-professional relations between doctors and other health care providers such as nurses. It is also important in fostering multiculturalism and in social accountability. Thus, benefits would be expected in terms of patients, HCWs, and the health system as a whole.

## **1.4 AIMS AND OBJECTIVES**

### **1.4.1 Aim**

The general aim of the study is to contribute to a better understanding of isiZulu clinical communication T&L in the MBChB programme as perceived by the students. It provides information about the students' communicative competence and use of isiZulu in the clinical setting, particularly in the Clinical Methods course of the third year of study in 2012. It also aims to clarify whether the current approach to the incorporation of isiZulu in the preclinical years of the MBChB programme at the NRMSM is providing a sound basis for the students' future professional needs, or if students require further vocation-specific language training to enable them to communicate safely and effectively with patients.

### **1.4.2 Specific objectives**

The specific objectives of the study were to:

- 1) explore and describe the knowledge, attitude and practice of the cohort of students who did the isiZulu module as first year students in 2010
- 2) describe the students' experiences and recommendations in relation to their learning and to the teaching approach to isiZulu in the first three years of the programme.

This study was conducted in third year students because they have reached a stage in the curriculum at which they come into direct contact with isiZulu-speaking patients in the wards in the Clinical Methods course, which highlights to them the necessity to be able to communicate effectively with their patients.

**These objectives of the study were addressed as follows:**

- 1) **Knowledge was measured in terms of:**
  - a) Demonstration of knowledge gained in the isiZulu module during the first year of the programme using a written test to demonstrate written linguistic competence; and
  - b) Demonstration of knowledge in an OSCE station using a standardised simulated patient to demonstrate oral communicative competence.
  
- 2) **Attitude was explored in the KAP questionnaire in terms of:**
  - a) Awareness of the UKZN Language Policy;
  - b) Support for the development of respect for the isiZulu language and culture;
  - c) Acknowledgement of the necessity, as future doctors, to learn isiZulu;
  - d) Perceptions of the experience of learning isiZulu as useful or beneficial;
  - e) Perceptions of clinical encounters in which isiZulu is the language of communication as enhanced; and
  - f) Belief that the ability to communicate with their patients in isiZulu will improve health outcomes.

- 3) **Practice was explored in the KAP Questionnaire in terms of:**
  - a) Use of isiZulu in the wards in the Clinical Methods course in the third year;  
and
  - b) Desire of the students to continue the use of isiZulu.
  
- 4) **The students' experiences and recommendations related to the teaching and learning of isiZulu** were further explored in the open enquiry section of the self-completed questionnaire.

Information gained will assist and strengthen T&L and will also provide insights and suggest opportunities for future research into the teaching of vocation-specific isiZulu to medical students.

## **1.5 SUMMARY & STUDY OUTLINE**

Chapter One has provided a background for the study. It has described SA as a multilingual country, and emphasized the importance of isiZulu as the most commonly spoken language in SA and KZN. It has further described the effect of language and cultural barriers, and stressed the importance of medical students learning isiZulu in order to be able to communicate with their patients. It has also described the current approach to the T&L of isiZulu in the MBChB programme, and the general aims and specific objectives of the study.

Chapter Two will outline the literature relating to:

- a) Language and cultural barriers and their effects on health care;
- b) Communication in health professional education, and research at South African universities on preparing professionals for multilingual contexts; and
- c) Theories of second language acquisition (SLA) and relevant teaching methods and approaches.

Chapter Three describes the research methodology and includes the study design and setting, study population, sampling strategy, methods of data collection and analysis, validity and trustworthiness of the study, and ethical considerations.

Chapter Four describes the findings of the study, namely the demographics of the study population, and thereafter the findings with respect to the knowledge, attitude and practice of the cohort. It also describes the students' experiences and their recommendations for isiZulu language teaching and learning.

Chapter Five presents the discussion of the findings and further addresses second language acquisition and the competencies necessary for medical students.

Chapter Six presents the conclusions of the study and makes recommendations for developing the T&L of isiZulu in the programme based on theory of SLA and past research.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 INTRODUCTION

The literature review in this chapter creates a conceptual framework and contextualises important background information for the study on the isiZulu communicative competence of third year medical students at the NRMSM.

The literature review is divided into three main sections.

The first part provides an overview of the literature related to the effects of language and cultural barriers in health care, both internationally and in South Africa.

The second section highlights research in the field of communication in the medical consultation, and the benefits of improved communication for health professionals. It refers to evidence-based strategies in the Calgary-Cambridge method (Silverman *et al.*, 2005), which are used to improve medical students' competence in communication. The section concludes with a review of literature in teaching and research of second language (L2) teaching in a vocational context at South African universities. This information relates specifically to preparing professionals for communication in multilingual contexts in SA.

The third section of the literature review covers the theoretical constructs in teaching a second language. This section includes an outline of some important theories related to SLA and refers to various teaching methods and approaches used in L2 teaching and learning. These theories and methods have been used to inform the suggestions made for a vertically integrated isiZulu course in the MBChB programme in Chapter 6, although structuring such a course would need further consultation and inputs from the relevant disciplines.

## **2.2 LANGUAGE & CULTURAL BARRIERS AND THEIR EFFECTS ON HEALTH CARE**

Research internationally and locally has shown that language barriers contribute to health disparities, and supports the fact that language and cultural barriers lead to poorer health outcomes (See Chapter 1).

Language and cultural barriers are common in South Africa, because of our history of segregation. Roughly one third of first year medical students in the MBChB programme at the NRMSM fail the isiZulu proficiency test in first year. Only these students are required to register for and pass the first year module in isiZulu. At this time, an undetermined number of students may pass this “proficiency” test and yet still not, in reality, be able to safely conduct a medical interview or counsel a patient in isiZulu. The implication of this statement is that at least one third of students would be expected to encounter language barriers in clinical interviews with patients.

### **2.2.1 International Evidence on Language and Cultural Barriers and Health Care**

There is considerable research evidence on the effect of language and cultural competence on quality of and access to health care, adherence, patient satisfaction and health outcomes, all of which have been shown to be adversely affected by language and cultural barriers (Betancourt *et al.*, 2003; Yeo, 2004; Goode *et al.*, 2006; Betancourt and Green, 2010; Lie, Lee-Ray, Gomez, Bereknyei and Braddock, 2011; Reardon, 2012). Furthermore, several studies (Goode *et al.*, 2006; Betancourt and Green, 2010) have shown evidence of improved attitudes, knowledge and skills of doctors and patient ratings of care when these competencies are improved.

In his review, Yeo (2004), reviewed selected computer databases to examine how language barriers contributed to health disparities among ethnic and racial minorities in the United States of America. In this article, he stressed that language was the means by which patients accessed health care and made health-related decisions. Equally important was the fact that language was the means by which health care providers accessed the patients’ perspectives and belief systems. He listed the consequences of language barriers in health provision as

including miscommunication, dissatisfaction with HCWs, poor compliance, inefficient use of or limited access to health services (such as cancer screening), as well as inefficiency and increased costs.

He also reviewed the use of translation services, and found limitations even with the use of professionally trained translators. His review also showed that language barriers were more evident in older and poorer patients, patients with lower educational levels, recent immigrants and female patients. He concluded that addressing language barriers was a method of improving access to care among limited English proficiency (LEP) persons (Yeo, 2004).

### **2.2.2 SA Studies on language & cultural barriers in health care**

Various studies in South Africa have also indicated language as a barrier to health care. (Crawford, 1999; Levin, 2006; Schlemmer and Mash, 2006).

The dominant position of English in health care was referred to by Crawford, in an article entitled, “*We can’t all understand the whites’ language: an analysis of monolingual health services in a multicultural society*” (Crawford, 1999). This study elucidated the complexities of the interactions between doctors and patients whose world views and home languages differed from one another at five Cape Town hospitals. In this uniquely SA problem, the author described a serious level of “misapprehension, mistranslation, loss of meaning, and consequent misunderstanding that occurred on a daily basis between doctors, nurses and patients” (Crawford, 1999, p.34). This problem resulted from an apartheid constructed society, in which most HCWs spoke English while most patients spoke an African language. Crawford described further how the Western biomedical model tended to disregard the patients’ construction of their illnesses, within a complex system of power relations within the doctor-patient and doctor-nurse-patient relationships. In this context, the patient occupied a position in which s/he was disempowered. Crawford felt that the difficulties encountered were compounded by nurses having to act as unpaid and untrained interpreters in the interaction between doctor and patient, but the provision of trained interpreters was not seen as a solution to the problem, as this posed additional problems, including those related to the ethics of involving a third party in the doctor-patient interaction. A general change in strategy was necessary, and this included “changing to a more culturally sensitive patient-centered model of care (*sic*)” (Crawford, 1999, p.42).



Levin's study on isiXhosa-speaking patients at a South African paediatric teaching hospital indicated that only 6% of medical interviews were conducted either partly or fully in the home language of the patient. The author found that " language and cultural barriers were cited by more parents as a major barrier to health care than structural and socio-economic barriers" (Levin, 2006, p.1076).

Schlemmer and Mash's focus group interviews (Schlemmer and Mash, 2006) with staff and isiXhosa-speaking patients at a Cape hospital concluded that language barriers resulted in reduced efficiency, uncertainty, ethical and medico-legal dilemmas, as well as a negative attitude of staff and patients towards each other. They furthermore noted that the quality of patient care and patient satisfaction deteriorated depending on the frequency of cross-cultural misunderstandings (Schlemmer and Mash, 2006). At the hospital where the study took place, the authors noted that doctors and nurses had requested courses in basic isiXhosa, and recommended that communication skills courses should be offered to staff. Importantly, the authors indicated that the expectation in terms of outcomes should be realistic. By this, they meant that staff of the hospital, as adult learners, would not become fully bilingual but that, instead, such a course would simply facilitate a basic understanding of medical isiXhosa and respect for the culture of isiXhosa-speaking people (Schlemmer and Mash, 2006). The inference from this is that the early introduction of teaching African language communication skills to medical students is extremely important, with continued support, to ensure the attainment of a useful level of communicative competence which can be carried forward into the clinical setting.

The studies described have indicated the profound effects of language-discordant health care in the South African context, and should support urgent action to ensure that medical students and doctors gain the requisite skills to be able to communicate in the language of their patients.

### **2.3 RESEARCH IN COMMUNICATION AND ITS TEACHING**

Research has shown numerous benefits to enhanced communication. Good communication allows for more effective clinical interviews, enhanced patient and professional satisfaction,

and improved health outcomes. Other benefits include better treatment adherence, improved patient safety and fewer malpractice claims. Good communication is a hallmark of excellence from the patients' perspective, with most patients using this as an indicator of what makes a good doctor. Various authors have stressed the importance of a doctor's ability to communicate well with patients for effective and safe clinical work and medical practice (Myerscough and Ford, 1996) (Hawken, 2005).

Training in clinical communication has shown benefits for both doctors and patients (Silverman *et al.*, 2005). Teaching communication has thus become an integral part of the medical curriculum. In many countries, including South Africa, communication is listed as a core competency for medical students (HPCSA, 2012). Efforts are being made to elucidate the key components and objectives for core communication curricula for medical schools, with a United Kingdom consensus statement on communication curricula having been developed in 2008, and further European and international consensus statements on learning objectives for a core communication curriculum in the health care professions created as a guide for teaching (Makoul and Schofield, 1999; Von Fragstein, Silverman, Cushing, Quilligan, Salisbury and Wiskin, 2008; Bachmann, Abramovitch, Barbu, Cavaco, Elorza, Haak, Loureiro, Ratajska, Silverman, Winterburn and Rosenbaum, 2012).

Simultaneously, there is increasing reflection in the profession on what makes a "good doctor". Attention is being paid to the competencies necessary for doctors, with a new emphasis on the social sciences, ethics and professional values. Many medical schools are including the topic of humanism in their medical programmes, and curricula are stressing the development of characteristics such as "empathy, respect, caring, integrity and service" (Ananth and Jonas, 2013, p.116).

In keeping with this emphasis, recommendations to inform the training of health professionals in the present time have stressed the need to produce doctors with various key abilities. The Lancet, one of the world's leading medical journals, in collaboration with key leaders in education worldwide, commissioned a report on health professional education which was published in 2010. This is considered one of the most important publications in this field since the Flexner report (1910) of a century ago, which introduced a science base to medical schools. The Lancet report (Frenk, Chen, Bhutta, Jordan, Crisp, Evans, Fineberg, Garcia, Ke, Kelley, Kistnasamy, Meleis, Naylor, Pablos-Mendez, Reddy, Scrimshaw, Sepulveda, Serwadda and Zurayk, 2010) highlights a call from a group of professional and

academic leaders in the field for major reforms in the training of doctors and other health care professionals to meet the needs of the 21<sup>st</sup> century. It stresses the kinds of reforms needed to improve service to diverse populations. The report concludes that medical curricula are outdated and static. It refers specifically to the fact that medical curricula need to be reoriented to meet patient and population needs, and further refers to the necessity for a competency-based approach, with a competency being defined as “the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individual and community being served” (Frenk *et al.*, 2010, p.1943).

The meta-competencies similarly recommended by the Health Professions Council of South Africa (HPCSA) as necessary for undergraduate medical students were developed by the Education and Training Subcommittee of the Medical and Dental Professions Board and other collaborators. These competencies were adapted from the CanMEDS Physician Competency Framework and describe the health care practitioner as the central role in the framework of core competencies, which comprise their roles as communicator, collaborator, manager, health advocate, scholar and professional (HPCSA, 2012).

In the context of doctor-patient communication in South Africa, Ellis has made a valuable contribution in his book on the subject (2004). Drawing on many years of clinical experience, he made recommendations to help doctors, nurses and other HCWs communicate with African patients (Ellis, 2004). He recommended that HCWs learnt isiZulu through their daily contact with their patients. He stressed that language was an integral part of the medical consultation and that learning isiZulu in the course of their daily work improved the relationship between the HCW and the patient. The reason for this was that, in this context, the HCW became a learner, which changed the power dynamic within the relationship and assisted in forming a successful collaboration between HCW and patient. This was particularly important in South Africa, with its history of domination of health services by English speakers, as referred to in the section which examines the effects of language barriers in health care (Ellis, 2004) .

The literature reviewed also provided an understanding of African language vocation-specific teaching and research conducted at this and other South African universities.

Various SA universities offer African language teaching as part of vocational training. Such teaching is being offered in the following departments and institutions:

- a) Psychology, Nursing, Dental Assisting and Education departments at UKZN;
- b) Pharmacy department at the University of Stellenbosch and the University of the North West;
- c) Pharmacy and Law departments at Rhodes University; and the
- d) Health Sciences Faculty of the University of Cape Town (UCT).

UCT in the past offered a year's course in isiXhosa to medical students, but Crawford (1999) stated that this course was completely ineffective in enabling medical students to communicate with their patients. Subsequently, UCT has integrated isiXhosa into the entire medical curriculum. They now have a well-developed programme, which includes extensive exposure to isiXhosa for medical students. In fact, UCT won the 2010/11 Multilingualism Awards in the education category of PanSALB (University of Cape Town, 2011).

At the University of KwaZulu-Natal, a multilingualism project formally known as the South African Norwegian Tertiary Education Development (SANTED) Programme was undertaken as a joint venture between Norwegian and South African groupings, including government and higher education institutions (Ndimande-Hlongwa, Mazibuko and Gordon, 2010). The authors stress the need for graduates in professional programmes at UKZN to have communicative competence in the isiZulu language, and that language must be developed as a resource which will give learners access to different cultures and also improve their employment prospects. Much of this work focuses on the importance of an understanding of the target culture relevant to the relationship of the professional with the patient. Additional work in this field (Wildsmith-Cromarty, 2003; Wildsmith, 2010) related to the acquisition process of African languages by learners and the promotion of multilingualism in higher education. This involved offering BICS courses for non-Zulu staff and students and terminology development in various disciplines such as those mentioned above. The aim of this initiative, in fact, is that ultimately isiZulu will be able to be used as a LoLT at UKZN.

Other literature which included practical recommendations for language learning linked to vocational training was authored by staff from Rhodes University (Maseko and Kaschula, 2009). In this, the authors recommended vocational training programmes as suitable for the South African context. They highlighted that it was the role of universities to incorporate appropriate training in language skills and cultural awareness as part of vocational training. By acquiring knowledge of language and culture relevant to their professions through such courses, students were likely to appreciate the benefits immediately, thus reinforcing learning. In this way, students would acquire not only language skills but also other metacognitive abilities which would contribute to their professional development (Maseko and Kaschula, 2009). Specific examples of vocation-specific content used for the teaching of an African language, in this case isiXhosa at Rhodes University, were given by the authors (2009).

The “isiXhosa for Pharmacy” course was described as including themes which were relevant to pharmacists, such as:

- a) how to give instructions on taking medication;
- b) health awareness;
- c) the management of chronic diseases; and
- d) the effect of socio-economic factors on medication compliance.

This example is cited here because it provides an example of the provision of relevant content required by students in everyday communication. This gives the student content which can be used immediately in a vocation-specific context, in this case by student pharmacists.

However, within the Health Sciences, there will be considerable overlap of content, as the themes mentioned above are also relevant to other students within the College of Health Sciences, including medical students.

Feedback from students on the course described by Maseko and Kaschula indicated an appreciation of the vocation-specific approach to the course. A student commented that the course had “enabled (the learners) to learn another language as well as the culture embedded in it” (2009, p.138). Because the acquisition of the language and culture was in a vocational context, students felt that the course was beneficial and that it assisted in promoting transformation in their approach to their patients.

## **2.4 THEORETICAL CONSTRUCTS RELEVANT TO THE STUDY**

### **2.4.1 Theories of Second Language Acquisition**

Numerous theories of second language acquisition have been proposed. There has been considerable discussion and debate about how language is learned, and many issues are still unresolved. Researchers have also examined factors that influence late language acquisition by adults.

It is beyond the scope of this study to list or analyse all the theories of SLA. However, a better understanding of some important theories related to how students acquire a second language is necessary for effective pedagogy. This understanding is important in the evaluation of current courses which aim to develop language competence in local L2 learners, and in the planning, design and implementation of an isiZulu course linked to the needs of medical students. It is also important to tailor this course for adult learners within the constraints of the current 6-year curriculum and to be realistic in terms of the expected outcomes of such a course.

The description which follows summarises the history and briefly describes and highlights the relevance of some of the important theories in SLA.

The history of SLA studies stemmed from the late 1960's and '70's, when the work of Corder and Selinker was published (Selinker, 1972; Corder, 1975). Corder rejected behaviouristic theories of language acquisition and suggested that learners made use of intrinsic internal linguistic processes. Behaviourism, an early theory, viewed learning as an observed behaviour which is automatically acquired by mechanical repetition of a stimulus and response (Menezes de Oliviera e Paiva, 2008). In the 1970's, research further explored the ideas of these authors. There was continued research in an area called error analysis, which tried to understand errors in the target language in terms of interference of the primary language with L2 acquisition. Interlanguage studies referred to an interlanguage or an emerging language system in the mind of the L2 learner, referred to by Selinker (1972). Language transfer (a process of falling back on the mother tongue), overgeneralisation and simplification were described as processes that influenced the creation of interlanguage.

Acculturation was an environmentally-based theory proposed by Schumann (1978). He felt that SLA was a result of acculturation by integrating the learner both socially and psychologically with the target language (Schumann, 1978). It is on this theory that learning language through immersion experiences is based. Schumann also expounded on social distance as a factor in SLA (Schumann, 1976), maintaining that social distance is not conducive to the learning of a new language especially if this involves a poor attitude on the part of one of the groups, or if one group is dominant over the other, factors which may have influenced poor uptake of some languages in South Africa by other language groups.

In the 1980s, the theories of Krashen became the prominent paradigm in SLA. In 1978, Krashen developed a model called the Input Hypothesis, which emphasized the contrast between the active learning and less conscious acquisition of a language. In 2004, he went on to develop the Comprehension Hypothesis which referred to the subconscious acquisition as opposed to conscious learning of a language. He viewed and described SLA as a linear process, describing a cause and effect relationship between language inputs and language acquisition. He theorised further that, in the process of language acquisition, the necessary grammatical structures were acquired by learners in a predictable order (Krashen, 1981; Menezes de Oliveira e Paiva, 2008).

Other researchers attempted to explain SLA by different versions of the Interaction Hypothesis defended by various researchers such as Long (1981), who rejected Krashen's hypothesis. Based on his study in 1981, Long asserted that modifications in interactions in the language were consistently necessary for SLA to be successful. Other researchers felt that this view was more powerful because it invoked both innate and environmental factors to explain how a language was learnt. Essentially, this theory maintained that the development of proficiency in a language was through communication, with interactions in the language facilitating learning (Long, 1981).

The Output Hypothesis of the 1990's maintained that practising a language was very important to allow learners to observe their own language production in the target language and reflect on their requirements for outputs. In 1995, Swain hypothesized that there were two functions to output, and described the importance of using the language for learners to test hypotheses and to trigger reflection on these outputs. He described further how the use of the language in dialogue built knowledge of language or linguistic competence in the

process of SLA (Swain, 1993; Menezes de Oliveira e Paiva, 2008).

An important area of research in the 1990's was linguistic theory based on Chomsky's earlier Universal Grammar Theory, which theorised about the presence of a language acquisition device in every human being, which is a biological endowment and is responsible for the first stage of language development (Chomsky, 1976; Menezes de Oliveira e Paiva, 2008).

Connectionism rejected the hypothesis that learners were innately endowed with such ability, and attempted to explain SLA in terms of mental representations and language processing. Experiencing and repeating a language was thought to strengthen neural connections. (Ellis, 1998; Menezes de Oliveira e Paiva, 2008). This theory may partly explain the perceived difficulty of older L2 learners, in whom the brain is committed to the first language. Connectionism proposed that language developed in a parallel as opposed to a linear fashion, involving various parts of the brain simultaneously. This theory was allied to emergentism theory, in which language representations emerged from interactions at many levels, from those in the brain to those in society. Studies in this field included the use of computers to stimulate neural networks and improve language learning.

The 1990's also saw the introduction of Sociocultural Theory, which emphasized the fact that language acquisition was a socially mediated process, emerging from the basis that humans as social beings engaged in social interactions in which they observed and imitated the behaviour of others (Menezes de Oliveira e Paiva, 2008). This theory, based on the original work of Russian psychologist, Vygotsky, included the concept of scaffolding which referred to assistance from others as fundamental to collaborative learning (Woolfolk, 2004).

In the 2000's, research continued to focus on the linguistic and psychological approaches, with much modern research in SLA having taken a cognitive approach. Neuroscience research has contributed to our understanding of how knowledge is learnt and retained. Cognitive theories view SL learning as a special case of more general learning mechanisms in the brain. A neurocognitive model referred to as the AGES model (Davachi, Kiefer, Rock and Rock, 2010) has shown that, to increase the effectiveness of learning, it is actually better to space interventions by dispersing content over a period of time. This strategy has been shown to improve better long term retention of knowledge. The four corner posts of the model stress the components of attention, generation, emotion and spacing as being



fundamental to hippocampal activation, which is considered to be vital for learning to take place.

In this neurocognitive model, Davachi, Kiefer *et al* stress that there should be full attention for learning to occur and that the learner should appreciate the value of focusing attention on content and the task to be learned. The authors suggest that teaching strategies should include a variety of experiences including making learning as relevant and realistic as possible, such as the use of advanced simulations, relevant to the methods being used at UKZN. They refer to the role of dopamine and norepinephrine in improving attention, and recommend varied learning methods, including role play and the use of scenarios for teaching and learning, in addition to making learning a more social experience (Davachi *et al.*, 2010). The next part of the model, generation, refers to strategies for storing and retrieving the knowledge gained. The key to improving this includes building ownership by the learner, who is encouraged to create personal ways of making knowledge meaningful. The way in which emotion is thought to improve memory is believed to be due to the activation of the amygdala. Thus, stimulation of positive emotions in the learner by making learning enjoyable may have a positive impact on new learning. Finally in this model, the matter of spacing is addressed (Davachi *et al.*, 2010). It has been known for some time that distributing learning over a period of time is preferable to massing it into short periods (Crowder, 1976). This leads to better long-term retention in the form of long term memory.

This model would help to explain why some learners are able acquire native-like proficiency in languages even when learnt late in life. Other factors, such as personal motivation, socialization and even first language background may be important influences in the mastery of second languages (McGill University, 2013), and it is these factors that should be built upon in attempts to enable medical students with no past isiZulu knowledge to attain communicative competence in the language which is fit for purpose in their chosen profession.

In summary, there are numerous theories of SLA, none of which fully explain the process. From these theories, it is evident that factors affecting language acquisition include external factors (input, interaction and social aspects) and internal factors (cognitive, sociocultural and linguistic factors), which should be considered when designing teaching activities for a SL curriculum.

## **2.4.2 Teaching methods and approaches in isiZulu language teaching and curriculum development**

Transformative learning theory has become the dominant educational philosophy of adult education, and an aim of the medical curriculum is to promote transformative learning in medical students. The theory was based originally on Mezirow's theory (1978) and involves perspective transformation. Mezirow theorized that transformative learning (located in a continuum of informative – formative – transformative learning) is grounded in human communication. Prior interpretation is used to construe a revised interpretation of the meaning of one's experiences in order to guide future action. This in turn leads to a transformation in perspective which is "a more fully developed...frame of reference... one that is more a) inclusive b) differentiating c) permeable d) critically reflective, and e) integrative of experience" (Mezirow, 1978, p.163). This type of learning may occur from a series of exposures or opportunities for learning, or as a result of a life crisis.

Alternate perspectives have been published by other researchers in transformative learning, and, in general, it is agreed that the process involves critical reflection to develop a deeper awareness of frames of reference and bring about new ways of defining world views. Taylor (1998) has since suggested that neurobiological research is also an important consideration, as new techniques such as magnetic resonance imaging (MRI) and positron emission topography (PET) are examining the brain responses that take place as these lessons are learnt, as reflected in the neurocognitive model referred to in this chapter. Experiences in multilingual and multicultural situations provide rich opportunities for transformative learning to take place, and the experiences of students in learning about the isiZulu language and culture will contribute to their learning and development as professionals.

With regard to language learning, terms commonly used in bilingual education arise from the early work of Cummins, in which he demonstrated his ideas about the two principal continua of SL development in a matrix (1999). Basic interpersonal communicative skills or BICS refers to the development of conversational fluency used for oral communication in the second language, whereas cognitive academic language proficiency or CALP describes the use of the language in decontextualized academic situations in which higher order thinking is

required. This model also refers to context-embedded or context-reduced, ranging from a situation requiring external clues to full reliance on language. Learners move from tasks that are less demanding to tasks with increasing cognitive challenges. Cummins (1999) suggested that it takes learners an average of two years to achieve a functional, social use of the language, but up to five to seven years and longer to achieve a high level of academic linguistic proficiency.

In making decisions about the language needs of medical students, consideration must be given to the level of SL proficiency needed to engage with isiZulu patients on a daily basis. Furthermore, in keeping with the UKZN Language Plan, emphasis should be placed on achieving BICS as a primary objective. It is vital to achieve as the learning outcome that the student has developed the necessary skills and competency in speaking, and in listening and comprehension, for a meaningful dialogue to take place in the clinical setting, and that this is appropriately assessed.

Methods used to teach isiZulu language currently include Communicative Language Teaching (CLT), which focuses on the learner conversing in the target language, in this case, isiZulu, as opposed to teaching about morphology and syntax of the language (Galloway, 1993). A second method used is Task-Based Language Teaching (TBLT), which exposes students to specific tasks to enhance their knowledge acquisition. The task-based approach emphasises the grading and sequencing of tasks to assist students to build on prior knowledge, and concentrates on authentic tasks which the learner will need to perform in the real world, as opposed to pedagogic tasks (Nunan, 2004). In addition, the course incorporates a philosophy referred to as Language for Specific Purpose (LSP), which aims to improve students' vocabulary through the teaching of the language with special emphasis on the acquisition of vocabulary needed by a doctor in daily clinical practice. This method requires a detailed needs analysis to determine the exact language needs of the learner for the professional or vocational context in which s/he works. Thus this method aims to provide the most relevant content in the most time-efficient way (Galova, 2007). These methods are useful when planning vocation-specific content and have been expounded on in the work of Gokool (2011). Incorporated into the teaching of isiZulu at UKZN, they have already given students increased exposure to isiZulu clinical content and are primarily intended to contribute to students' communicative competence (Matthews and Gokool, 2012).

SLA researchers are not in agreement on how best to facilitate language learning. However, general guidelines have been outlined by researchers such as Ellis (2008), who described ten important principles of instructed SL acquisition. Amongst these are ensuring rule-based competence, a focus mainly on meaning and form, the development of implicit knowledge of the SL, the provision of extensive SL inputs (such as relevant terminology) and opportunities for outputs as well as opportunities to interact in the SL (Ellis, 2008).

The World Health Organisation (WHO) has defined social accountability of medical schools as their obligation to direct education, research and service activities towards addressing the priority health concerns of the community, region or nation that they are mandated to serve (Woollard, 2010). Therefore, health professional educators should aim to produce graduates who are socially responsible to the isiZulu-speaking population they serve in KZN. Important pre-requisites for patient-centredness and social responsibility should include that medical students graduate with both the requisite communicative and cultural competence in isiZulu.

As described in Chapter 1, the teaching of clinical communication at the NRMSM is based on the Calgary-Cambridge method (Silverman *et al.*, 2005). This approach stresses the importance of both content and process skills in the medical interview (Kurtz, Silverman, Benson and Draper, 2003). The approach further incorporates the teaching of a patient-centred method which locates the patient's ideas, beliefs and expectations prominently in the medical interview, thus making it a method which adapts easily for use in the South African context. Importantly, the strategy recognises the importance of psychosociocultural and behavioural determinants of health on health outcomes.

## **2.5 SUMMARY**

This chapter has described the adverse effects of language and cultural barriers on health care, and the difficulties experienced when doctors and patients are unable to speak the same language. It has provided background information on the importance of good communication for medical students and has reviewed some aspects of vocation-specific African language training at South African universities. The necessity for communicative and cultural competence in isiZulu for medical students and doctors in KZN has been emphasised.

A description of the history of SLA theory, including a reference to neurocognition, and methods used in L2 teaching was provided to explain how they inform the recommendations which will be made in Chapter 6 for integrating isiZulu language teaching and learning into the 6-year MBChB programme to achieve communicative competence in isiZulu for graduating students.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 INTRODUCTION**

The general aim of the study was to contribute to a better understanding of isiZulu clinical communication teaching and learning in the MBChB programme as perceived by third year students. The study aimed to clarify whether the current approach to the incorporation of isiZulu in the preclinical years of the MBChB programme at the NRMSM provided students with a sound basis for their future professional needs. The specific objectives of the study were to explore and describe the knowledge, attitude and practice of the cohort of students who did the isiZulu module as first year students in 2010. This was done using a KAP survey questionnaire. An open enquiry section provided an opportunity for students to describe their experiences and provide recommendations related to the teaching and learning of isiZulu.

#### **3.2 RESEARCH DESIGN**

The research was educational research that used both quantitative and qualitative data collection strategies.

The quantitative data was collected by means of a self-completed Knowledge, Attitude and Practice (KAP) survey (Likert items in Questions 10-26). Further quantitative data was collected in the form of a marked written test and the marks obtained for the OSCE station during the 3<sup>rd</sup> Year end of module examination (see section 3.3.1) The qualitative data was generated from an open enquiry section (Questions 27 and 28), in which students reflected and offered comments on their experiences related to the use of isiZulu, its T&L, and added their recommendations.

Refer to Table 2 for a summary of the type of data and analysis method.

##### **3.2.1 Study design**

The study was an observational analytical cross-sectional study.

### **3.2.2 Study setting**

The study was conducted with third year students at the Nelson R. Mandela School of Medicine, where the demographic profile of the students is mixed, with students of urban and rural origin, most of whom were taught in English at school level, even if they are mother-tongue isiZulu speakers. The profile of the study sample will be described in detail in the next chapter.

### **3.2.3 Study population**

The study population consisted of all third year students who enrolled for the first year isiZulu module in 2010, the year in which the NRMSM commenced the 6-year or “new” curriculum as described in 1.2.3. The group consisted of a linguistically and culturally diverse group of students, all of whom were non-isiZulu first language (mother tongue) speakers. All the students in the sample failed the isiZulu proficiency test at the beginning of their first year. No isiZulu speakers failed this test in spite of the influence of English in their education, but the study population did include one student who had studied isiZulu to matric level at school and yet still failed the proficiency test.

### **3.2.4 Study Sample**

A list of 86 students who enrolled for the module in 2010 was sourced from the isiZulu tutor, and all students were invited to participate in the study. No sampling was applied as the study was cross-sectional in nature. There were thus no exclusion criteria.

## **3.3 DATA SOURCES**

### **3.3.1 Research Instruments and List of Variables**

The research instruments were a KAP questionnaire, a written test and a checklist used in the OSCE. The variables are described under each instrument, and consisted of questionnaire items and test or OSCE marks. The types of data and mode of collection are summarised in Table 2.

#### **a) Questionnaire – see Appendix 2**

The KAP questionnaire included questions related to personal information about the students,

language competencies and the specific objectives of the study. The questionnaire used a standard KAP format (Katzenellenbogen, Joubert and Abdool Karrim, 2007) and was designed specifically to explore the attitude and practice of students in the cohort on specific items related to the T&L of isiZulu clinical communication.

For the purposes of the study, attitude was explored in an attempt to understand students' behaviour with respect to the T&L of isiZulu in the programme. The everyday use of attitude refers to a feeling or way of thinking that affects a person's behaviour. "Attitude" as defined by Allport (1935) as a mental state of readiness, resulting from experience, which influences the individual's response to related objects and situations. Attempts at analysing "attitude" typically relate to efforts to explain behaviour. In fact, attitudes are a complex combination of factors related to personality, beliefs, motivations and perceptions (Allport, 1935). Thus the study attempted to explore attitude in terms of awareness and feelings of students about the subject of learning isiZulu as medical students. Individual items are useful to gain insight into specific issues such as awareness of policy. The survey further explored behaviour in terms of practice or use of isiZulu in the clinical situation with patients or staff.

In designing the questionnaire, the following steps were followed:

- 1) The specific objectives were defined by deciding on the items to be included to gain an understanding of students' attitude and practice.
- 2) The survey was developed (see Appendix 2) and the translation component of the proficiency test was appended to it to be a tool to measure written proficiency in isiZulu.
- 3) The survey questionnaire was designed and piloted as described.
- 4) Corrections as described were made to the questionnaire following the pilot study.

The questionnaire consisted of 28 items, in 4 sections, described below:

1. Questions 1 – 8 provided demographic and language details.
2. Question 9 explored language competency in English, Afrikaans, isiZulu and other languages.
3. Questions 10 - 26 were scored using a 5-level Likert item for each variable under study and provided quantitative data.



The levels 1-5 were described as follows:

1 = Strongly disagree/ not at all

2 = Disagree/ very little

3 = Neither agree nor disagree/ neutral option

4 = Agree/ somewhat

5 = Strongly agree/ a lot

- a) To measure attitude, Questions 10-16 and 20-24 measured awareness, beliefs, perceptions and desire as components thereof.
- b) To measure practice, Questions 17-19 and 25-26 measured the use of the language and wish to further use the language as components thereof.

Individual Likert items were recorded and, thereafter, separate Likert scales for attitude and practice were created. These Likert scales were the mean of responses of several Likert items related to attitude and practice respectively. Such a mean score (referred to as a Likert scale) is considered more reliable than individual items (Gliem and Gliem, 2003).

- 4. Questions 27 and 28 comprised the open enquiry section of the questionnaire and collected qualitative data on students' experiences and recommendations on the teaching and learning of isiZulu. This information was analysed thematically.

#### **b) Written test – see Appendix 2**

Students were asked to write a 60-mark written test at the time of completion of the questionnaire. This served to assess their knowledge of isiZulu in the form of written linguistic competence. The task was the clinical translation component from the isiZulu proficiency test written by the study group in 2010. It consisted of 30 general statements and questions, mostly of a clinical nature, and required students to translate 15 statements from English into isiZulu and 15 statements from isiZulu into English. Each statement was worth 2 marks. The marks scored were further analysed by section and also compared with the mark scored in 2010.

#### **c) OSCE station**

The students' OSCE mark in the October 2012 examination was recorded and used as an indicator of knowledge in the form of communicative (oral) competence in isiZulu. The

OSCE included a short station requiring each student to take a history from a standardised simulated patient in isiZulu (see definitions). The topic was related to the themes studied in the semester and students were given study material and voluntary supplementary tutorials before the OSCE.

Marks were scored for:

1. Initiating the session correctly: greeting and introduction, permission, establishing the presenting complaint;
2. Gathering information related to the specific presenting complaint; and
3. Closing the session appropriately.

The marks of the group of students in the study sample were compared with the class average. This gave an indication of how the students in the study fared in terms of their knowledge and communicative skills when compared with students in the same year of study who were exempted from the isiZulu module by virtue of having been deemed proficient in isiZulu (by virtue of passing the proficiency test in first year, or as mother tongue isiZulu language speakers).

### **Strengths and limitations of the study**

The strength of the KAP survey was that a large amount of data could be collected from participating students to contribute to a snapshot view of their attitudes and practice. This involved the use of a customized questionnaire with questions to explore relevant aspects of isiZulu clinical communication. There are, however, limitations in that the items are only indicative of attitude and practice, and there may be various factors which influence students' responses, as in the item on desire to work in a rural area. The survey has, however, contributed to our understanding of this subject for medical students.

The measurement of knowledge involved two items, the mark from the test for written proficiency, and the mark from the OSCE for oral or communicative competence. These two sets of data did not test the student in an authentic clinical setting, and only provided an indication of learning of isiZulu in this group. Similarly, students were asked to rate their own ability in isiZulu as an indicator of knowledge.

## **3.4 MEASURES TO ENSURE VALIDITY OF DATA**

### **3.4.1 Internal Validity**

#### **3.4.1.1 Pilot study**

To improve the internal validity of the study, a small pilot study was carried out on 17<sup>th</sup> October 2012 following a teaching session at the NRMSM. Prior to this, three groups of second year students attending Clinical Skills sessions were approached to ask students who had done the isiZulu module in 2011 to participate in the pilot. Six students from these groups volunteered.

The group consisted of one male and five female students. Students were briefed on the purpose of the study, asked to peruse the information sheet, and to complete the informed consent and questionnaire. The purpose of this exercise was to obtain feedback from the students regarding the clarity of the instructions and questionnaire. The students were not expected to write the test.

The following alterations were made:

#### **1) Information for participants and consent to participate in research**

##### **(Appendix 2):**

This was easily understood by all students in the pilot study. Under the consent section, where the student's name was requested, "and Surname" was added. (This was on the detachable portion of the questionnaire, and was used by the researcher to check names against the original class list in order to obtain as comprehensive a sample as possible).

#### **2) Questionnaire (Appendix 2):**

- i. Instructions: No 2 – students asked how to mark the questionnaire – added "using a tick (✓)".
- ii. Personal Information: No 8 – students requested clarity and wording was changed to read "any additional isiZulu studies or exposure other than that provided at UKZN".
- iii. Likert item 22 and 23 – students requested clarity and "in my future career" was added.

### **3) Test (Appendix 2):**

The students did not write the test in the pilot study but perused the contents and found the instructions, which were given in English and isiZulu, clear.

The alterations as detailed were made to the questionnaire for clarity and ease of use.

#### **3.4.1.2 Reduction of bias**

##### **Selection bias**

This was minimized by carrying out a cross-sectional study to include as many as possible of the student group who had enrolled for the isiZulu module in 2010.

##### **Information bias**

###### **a) KAP Questionnaire**

With respect to the use of a Likert scale, central tendency, social desirability and acquiescence bias are known possible forms of bias.

Central tendency bias can be limited by use of an even numbered Likert scale with no neutral, but generally it is preferred to use a 5-point Likert, which allows neutral as a legitimate opinion and has a 3-rating as a central point, which indicates mixed satisfaction. For this reason, a 5-point Likert scale was selected for use in the study (Johns, 2010).

For quality control in completion of the questionnaire, the students were briefed to ensure that the information collected was as accurate and complete as possible. Students were asked to be frank and honest in their responses to the Likert items. Acquiescence and social desirability bias were minimized by ensuring that students were aware that their responses were anonymous. The questionnaires were numbered and separated immediately from the consent forms and thus carried no identifying data such as name or student number.

###### **b) Written test**

For consistency and to ensure reliability of the marking process, only 2 markers marked the test scripts. One examiner marked the English to isiZulu translation and the other the isiZulu

to English translation. The marker for the first of these was the isiZulu tutor. The latter component was marked by the researcher. If there was any uncertainty, the 2 markers conferred regarding the mark for consistency.

#### **c) OSCE station**

Marks for the OSCE station were scored in the final examination against exam numbers. No names were used and the examiners, both of whom are isiZulu mother-tongue speakers who are employed in student teaching in the MBChB programme, were provided with a checklist and briefed fully on its use. Both markers had past experience in OSCE examining and were unaware of which students were included in the study. The marks were extracted from the relevant spreadsheets after the completion of the OSCE.

### **3.4.2 Trustworthiness of the data**

As the author of the study, I have no vested interests to declare in terms of the outcome of this study. The study was not funded. At the time of the study and now, I am not involved directly in teaching isiZulu in the isiZulu module in the first year. However, I have assisted the isiZulu tutor, provided clinical content for scenarios and acted as an internal moderator in orals and for the first year module, as I am competent in speaking isiZulu necessary in the clinical setting having been a practicing clinician for many years. I am the Head of Clinical Skills and have an oversight function for the OSCEs, in which all stations, including the isiZulu stations, have been independently moderated. In addition, whilst the study was in progress, I have been involved simultaneously in researching the use of videos of clinical scenarios as an aid to teaching isiZulu to medical students.

To ensure the best quality of data, students were assured of confidentiality of their responses, and that their participation was voluntary. Students were told they could withdraw from the study at any stage if they wished. Students were asked to be honest in their comments, which were retrospective (as the information was given after the completion of the module and all the OSCE assessments, at the end of the third year). Thus the participants were certain that there could be no negative consequences of unfavourable comments. Students were not obliged to complete the open enquiry section, and all students who completed this section gave their comments freely.

### **3.4.3 External Validity**

#### **3.4.3.1 Generalisability**

Results from the study will impact on the T&L of isiZulu in terms of improvements to the course which may be implemented after the study is complete. In this way, it will benefit all non-isiZulu first language speakers entering the MBChB programme at the NRMSM.

In addition, the explanation of the setting, context and aims of this course will allow other researchers and course designers who offer similar language courses for improving clinical communication in health professional education to use relevant strategies and suggestions to enhance their courses. Thus the findings and rich description in the study, as opposed to being generalisable, will be generative, and suggest opportunities for further development of teaching and research in the field of vocation-specific isiZulu for medical students.

### **3.5 DATA COLLECTION STRATEGIES**

The survey and test were administered to the students in an initial sitting in a lecture venue under the supervision of the researcher.

To ensure maximum participation, non-participants were followed up individually via their tutorial groups and by e-mail, and a repeat session was scheduled, which improved the final participation rate.

The marks for the OSCE station were recorded on 25<sup>th</sup> October 2012, in the scheduled third year end-of-module examination. The marks were extracted from the Microsoft Excel 2010® results sheet compiled and checked by the administrator and responsible academic.

### **3.6 DATA MANAGEMENT**

The data was checked and captured, and thereafter analysed as described in this section.

Quantitative data was checked for completeness and inconsistencies, and coded for entering into IBM SPSS Statistics 21® and Microsoft Excel 2010®. Thereafter it was entered and saved in spreadsheets, followed by appropriate statistical analysis.

Qualitative data was captured and coded for thematic analysis (Cohen, Manion and Morrison, 2011; Miles and Huberman, 2013) in Microsoft Excel 2010® spreadsheets.

All raw data will be kept under lock by the researcher for a period of five years as detailed in the information for participants.

### **3.6.1 Statistical methods**

#### **3.6.1.1 Descriptive statistics**

Categorical data was described in terms of frequency distributions and in appropriate summary tables.

#### **3.6.1.2 Analytic statistics**

##### **a) Likert items in the questionnaire**

The analysis of the Likert items in the questionnaire related to the specific objectives of the study.

Each item from questions 10-26 was analysed separately using a 5-level Likert scale to indicate a negative, neutral or positive response to the statement. Frequency tables were drawn up for each of the Likert items, and histograms were plotted per item for a visual analysis of the distributions of the variables. Treating Likert items as ordinal data, each item was analysed using measures of central tendency. Although means were calculated, the median and mode were also calculated and recorded to allow for non-parametric data (Kirkwood and Sterne, 2008).

Agree and disagree responses were analysed for certain items as described.

After the individual analysis of the Likert items was done, Likert items were grouped and averaged to create Likert scales or mean scores for attitude and practice for each student in the cohort. The mean scores were further analysed for measures of central tendency and with frequency tables and one-sample t-tests (Kirkwood and Sterne, 2008).

##### **b) Written test**

The written test was scored separately for an analysis of students' written competence. The

marks scored in this test were further analysed, as follows:

1. Comparison of the 2 components in a paired t-test to compare the students' ability to translate from English to isiZulu and vice-versa
2. General comparison of the marks with the marks scored by the students in 2010 to assess if language learning had occurred, and for retention of knowledge.

**c) OSCE station**

Communicative competence was assessed in the OSCE, and the students' marks compared with the class marks in a one-sample t-test.

Thus, language learning was assessed in two ways in the study – once against students' own scores in the proficiency test and once against their peers in the OSCE.

**3.6.1.3 Possible confounders**

There was potential for confounding if students who did the isiZulu course had additional exposures to isiZulu other than the exposure in the MBChB programme, as this would affect the outcome variables. This information was elicited in the questionnaire.



### 3.7 SUMMARY OF RESEARCH

**Table 2: Summary of Research Objectives, Type of Data, Sample Size, Data Collection Tools, and Type of Analysis used in Study**

	<b>Research Objective</b>	<b>Type of Data</b>	<b>Sample size - N or n</b>	<b>Data Collection Tool</b>	<b>Type of analysis</b>
<b>Know- ledge</b>	Measure the knowledge of the students – (written)	Quantitative data – score or mark	n=60	Written test	Range, Mean and SD Comparison with Year 1 mark Comparison of means of the 2 components – paired t-test
	Measure the communicative competence of the students – (oral)	Quantitative data – score or mark	N=61	OSCE station	Range, Mean and SD Comparison of mean with class mean – 1-sample t-test
<b>Attitude</b>	Explore and describe the attitude of students to isiZulu language learning	Quantitative – individual scores for Likert items (ranked ordinal data) and Likert scale or mean of responses to several items	N=61	KAP Survey	Likert items - Mean, SD, Median and Mode – to allow for non-parametric data Likert scale - Summed (at least 5 items) Analysis of agree/disagree options
<b>Practice</b>	Explore and describe the practice of students of the isiZulu language in the clinical setting	Quantitative – individual scores for Likert items (ranked ordinal data) and Likert scale or mean of responses to several items	N=61	KAP Survey	As for above
<b>Experiences</b>	Record the students' experiences of learning isiZulu	Qualitative data	Subgroup who respond to open enquiry =n	Open enquiry section in questionnaire	Thematic analysis
<b>Recommendations</b>	Record the students' recommendations for teaching and learning of isiZulu	Qualitative data	Subgroup who responded to open enquiry =n	Open enquiry section in questionnaire	Thematic analysis

### **3.8 ETHICS**

In order to ensure adherence to all ethical principles, the following steps were taken:

- a) Permission for the study was obtained from the Dean of the School of Clinical Medicine.
- b) Permission to conduct the study was granted by the Human and Social Science Research Ethics Committee (HSS/0974/012M). See Appendix 1.

In terms of the basic ethical principles of beneficence, non-maleficence, patient autonomy and justice (Katzenellenbogen *et al.*, 2007):

- a) Individual informed consent was obtained from each student participating in the study, after a briefing on the nature and purpose of the study. The information for participants, consent form and questionnaire were in English only, as it is the language of learning and teaching (LoLT) at the NRMSM.
- b) Students were assured of voluntary participation in the study, and were told they could withdraw from the study at any stage if they wished.
- c) Students were assured of confidentiality of their responses.
- d) Students were informed that the general benefit of such a survey and study would be to contribute to improving knowledge relating to the teaching and assessment of isiZulu.
- e) On completion of the study, the results will be disseminated to interested parties and the findings will be presented at conferences and submitted for publication in a peer-reviewed journal.

### **3.9 WORK PLAN**

A limited budget was necessary and no additional funding was required. The study period started in June 2012. Questionnaires were administered in November 2012. Data was collated in December 2012, and captured and analysed in January and February 2013. The study was written up in March to June, and finalized in November 2013.

### **3.10 SUMMARY**

This chapter provided the details of the research design and methodology, sampling, data sources, collection, analysis and management. It further described the internal validity, trustworthiness and external validity of the study. Finally, ethical issues pertaining to the study and author were recorded.

## CHAPTER FOUR

### RESULTS

#### 4.1 INTRODUCTION

The specific objectives of this study were to measure the knowledge, explore and describe the attitude and practice of third year students in their interaction with the T&L of isiZulu clinical communication at the NRMSM, and to describe their experiences and recommendations on how to improve their learning and competence in the language. This chapter provides an analysis of the results as indicated below to answer each of the stated objectives:

- a) Results of written tests, marks for the OSCE station and students' self-reported ability to speak isiZulu for knowledge;
- b) Results of analysis of Likert items for attitude and practice; and
- c) Results of thematic analysis of qualitative data on experiences and recommendations.

Six of the original 86 students identified from the first year isiZulu class of 2010 were no longer registered or in the third year of the programme at UKZN. This left a potential cohort of 80 students.

Of the final cohort of 80 students, 18 students failed to complete the questionnaire (non-response in spite of several requests) leaving a total of 62 questionnaires for checking and analysis. One incomplete questionnaire was returned to the student for completion but not re-submitted. Therefore, the final total of questionnaires for data capture was 61, which was a response rate of 76.25% of the cohort.

One student (Respondent 43) elected not to do the Year 3 test but agreed to complete the questionnaire, thus this student had no mark for the test. No specific reason was given. One other student (Respondent 32) omitted part of the test i.e. the test appeared incomplete, but the mark for those items attempted was included in the Year 3 test marks.

## **4.2 DESCRIPTIVE STATISTICS**

### **4.2.1 Demographic Data - Summary of Main Results**

As indicated in Table 3, which provides a summary of the demographic data, the home country of 98.4% of the cohort was South Africa (n=60). Of the South African students, 91.8% (n=56) were resident in KwaZulu-Natal.

The home language and LoLT was English in 88.5% (n=54) and 95.1% (n=58) respectively. Only 1 student had studied isiZulu to Grade 12, and no students had been exposed to any additional isiZulu since 2010 (i.e. other than that offered at UKZN), excluding this as a confounder.

Students in the group ranged from 20 to 34 years old, with 83.5% (n= 51) being 20 to 25 years old. The group consisted of 73.8% (n=45) females and 26.2% (n=16) males. The majority (77%, n=47) were Indian students.

**Table 3: Profile of Students in Study Population at the NRMSM in 2012 (N=61)**

(Note: Figures may not add up to 100% due to rounding)

<b>Gender</b>	<b>n</b>	<b>Percentage</b>
Male	16	26.2
Female	45	73.8
<b>Age</b>		
20 years	26	42.6
21-25 years	25	40.9
26-30 years	8	13.1
Over 30 years	2	3.2
<b>Race</b>		
Indian	47	77.0
White	9	14.8
Coloured	3	4.9
African	1	1.6
Other (Chinese)	1	1.6
<b>Home country</b>		
South Africa	60	98.4
Zimbabwe	1	1.6
<b>Home province</b>		
KZN	56	91.8
Gauteng	1	1.6
Limpopo	2	3.3
Eastern Cape	1	1.6
Not applicable	1	1.6
<b>Home language</b>		
English	54	88.5
English + 1 other	3	4.9
Afrikaans	3	4.9
Other language	1	1.6
<b>LoLT</b>		
English	58	95.1
Afrikaans	1	1.6
English + Afrikaans	2	3.3

## Language

### 4.2.2 Language competence – English, Afrikaans and other

Most students rated themselves as competent in English, with 98.4% (n=60) marking all 3 indicators when prompted to rate their competence in terms of three indicators: “Speak/ Read and Write”.

Competence in Afrikaans was deemed to be reflected by any 2 or 3 out of the 3 indicators, and 85.2% (n=52) of students fell into this group, with only 3.3% (n=2) marking no indicators at all for Afrikaans. This would suggest that the majority of the group considered themselves competent in Afrikaans from exposure at school level, as only 4.9% (n=3) gave Afrikaans as a home language, with another 1.6% (n=1) giving English and Afrikaans as home languages.

In response to the question to list any other language competencies, 14.8% (n=9) responded with varying indicators of ability to “Speak/ Read/Write” in languages including Gujarati (2), Tamil (2), Arabic (1), Urdu (1), Chinese (1), Shona (1), and French (1). One student added German with the annotation “Understand” only.

**Table 4: Language Competence – English, Afrikaans, Other - Students’ Own Ratings (N=61)**

<b>Language</b>	<b>Definition</b>	<b>n</b>	<b>%</b>
<b>English</b>	All 3 indicators	<b>60</b>	<b>98.4</b>
<b>Afrikaans</b>	2 or 3/3 indicators	<b>52</b>	<b>85.2</b>
<b>Other language</b>	Any indicator	<b>9</b>	<b>14.8</b>

## 4.3 ANALYTIC STATISTICS

### 4.3.1 KNOWLEDGE

Knowledge was assessed objectively using a written test and the OSCE station. Student's self-reported ability to speak isiZulu as per their responses in the questionnaire was also analysed and reported.

#### 4.3.1.1 Written test

A 60-mark test was administered to the students with the questionnaire, testing retention of knowledge and written proficiency in isiZulu. This test was the translation section of the proficiency test which was written in Year 1 by the students in the study. The contents thereof are described under Methods.

The range of marks for the cohort for this test, written by the students in 2012 in the third year as part of this study, was:

**22-95%, Mean 61.77% (SD 18.061) (n=60\*)**

(\*n=60, as 1 student who completed the questionnaire refused to do the test).

The results for the students' proficiency test in Year 1 in 2010 were obtained from the isiZulu tutor. This test was marked out of 120 marks and included the 60-mark translation component administered to the students while they were in their third year in 2012.

In 2010, all students in the study group chose not to write or failed the original test. Thirty nine (39) students, including those who did not write the test, received a mark of 0%. The remaining 22 students received marks ranging from 3 – 47%.

Thus the range of marks for the original proficiency test, written by the same group of students in the first year prior to starting the isiZulu module, was:

**0 – 47%, Mean 7.31% (SD 11.972) (N=61).**



**Table 5: Written Test Results for Cohort – 2010 and 2012**

<b>Test</b>	<b>Range</b>	<b>Mean</b>	<b>SD</b>
Proficiency test in 2010 (N=61)	0-47%	7.31%	11.972
Test in the study in 2012 - Translation component (n=60)	22-95%	61.77%	18.061

Unfortunately, it was not possible to obtain the test scripts from 2010, as these had been discarded. Having the original scripts would have allowed a comparison in the form of a paired t-test on that component only. However, it is clear from the results described above that students had demonstrated an improvement in knowledge and written proficiency in translation.

Further analysis of the two components of the test showed the following:

- 1) English to isiZulu translation** – average for cohort 17.250/30 (57.5%)  
**Mean 17.2500, SD 6.03977 (n=60)**
- 2) IsiZulu to English translation** – average for cohort 19.7333/30 (65.8%)  
**Mean 19.7333, SD 5.44422 (n=60)**

Using a paired t-test, students scored significantly lower in the English to isiZulu translation component, indicating a higher degree of difficulty when translating from English into isiZulu, in keeping with their early stage of language acquisition.

**t= -4.938, Sig =.0000, 95% CI**

#### **4.3.1.2 OSCE Station**

The students' OSCE mark in the October 2012 exam was recorded and used as an indicator of communicative competence in isiZulu.

The range of marks for this station (isiZulu history taking) was:

**44-96%, Mean 69.77% (SD 11.420) (N=61).**

Using a one sample t-test, the OSCE marks for the cohort were compared with the marks for the class overall. No significant difference was found between the two groups.

**t=1.443, Sig .154, 95% CI (-.81 – 5.04)**

#### **4.3.1.3 Language competence – isiZulu (self-reported ability)**

This group, with the exception of 1 student who studied isiZulu to Grade 12 at school, entered medical school with no prior isiZulu knowledge. All of them failed the isiZulu proficiency test in Year 1 and therefore, on entry, had no functional proficiency in isiZulu. Thus, the indicators marked for isiZulu are considered an outcome variable, dependent on the teaching and learning of isiZulu at UKZN.

With respect to language competence, the instruction in the questionnaire stated, “Please mark any languages you are able to use (speak/read/write) with understanding (even if you are not fully proficient), in a medical interview or consultation e.g. taking a history, reading a referral letter..., making notes in a file.”

Of the cohort, a total of 63.9% (n=39) considered themselves able to speak isiZulu. This consisted of 24.6% (n=15 students) who marked all 3 indicators, 8.2% (n=5 students) who marked 2/3 indicators including Speak, and 31.1% (n=19 students) who marked Speak only. In addition, 1.6% (n=1 student) marked Write only, and 4.9% (n=3 students) marked Read only. 29.5% (n=18 students) marked no indicators for isiZulu. It is important to note that all indicators marked by the students in the cohort were included, even in cases where students annotated this with comments such as “average”. (Refer to Table 6 below).

**Table 6: isiZulu Language Competence – Students’ Own Ratings in 2012 (N=61)**

<b>Language</b>	<b>Definition</b>	<b>n</b>	<b>%</b>
<b>isiZulu</b>	All 3 indicators	<b>15</b>	<b>24.6</b>
	2/3 indicators including Speak	<b>5</b>	<b>8.2</b>
	Speak only	<b>19</b>	<b>31.1</b>
	Read only	<b>3</b>	<b>4.9</b>
	Write only	<b>1</b>	<b>1.6</b>
	No indicators	<b>18</b>	<b>29.5</b>
<b>Total</b>		<b>61</b>	

### 4.3.2 ATTITUDE

In order to measure the attitude of the students toward isiZulu language teaching and learning, the Likert items described below were analysed individually. Thereafter, a Likert scale for attitude was derived from the twelve individual Likert items for attitude.

Questions 10-16 and 20-24 in the questionnaire were used to measure awareness, beliefs, perceptions and desire to work in a rural area as components of attitude.

The variables were related to the students' awareness and perceptions of the language and of the educational experience. Issues such as awareness of the UKZN language policy and attitude of respect for the isiZulu language and culture were explored. Students were asked their beliefs about the necessity, as medical students, to learn isiZulu, and the usefulness of the various teaching strategies. Their perception about whether concordant language use would enhance clinical communication and improve individual and public health outcomes was explored.

Table 7 (below) summarises the results with respect to the individual responses to the twelve items which measured students' "attitude".

**Table 7: Measurements of Central Tendency: Attitude Scores for Cohort in 2012**

<b>Attitude Scores (N=61)</b>	<b>Mean</b>	<b>Median</b>	<b>Mode</b>	<b>SD</b>
1. Awareness of UKZN language policy	3.49	4.00	5	1.577
2. Respect for isiZulu language and culture	4.56	5.00	5	0.764
3. Need for isiZulu	4.39	5.00	5	0.881
4. Year 1 module useful	4.31	5.00	5	1.133
5. Simulated patients useful	4.15	4.00	5	1.062
6. Moodle content useful	4.40	5.00	5	0.848
7. OSCE useful	3.92	4.00	5	1.215
8. Enhanced student-patient communication	3.69	4.00	4	1.119
9. Enhanced student-staff communication	3.21	3.00	3	1.051
10. Perception improved health outcome patient	4.43	5.00	5	0.884
11. Perception improved health outcome community	4.43	5.00	5	0.805
12. Desire to work in rural area after qualifying	2.70	3.00	3	1.256

In the category of attitude, students showed a high level of respect for isiZulu language and culture (Mode 5, Mean 4.56), and acknowledged the necessity for learning isiZulu as aspirant doctors (Mode 5, Mean 4.39). In the summed agree/strongly agree (positive) responses, 90.2% and 88.5% were the respective values for these two items.

With respect to awareness of policy (Mode 5, Mean 3.49), this percentage was considerably lower, with only 59% positive responses, indicating that this could receive more emphasis at UKZN.

Most students found the current interventions or teaching strategies useful, with the highest acceptance rate for Moodle (88.4%) and the lowest for the OSCE station (67.3%). Over 80% of students found the Year 1 module and use of simulated patients to be useful.

In the area of perception that language concordant patient interviews could lead to improved health outcomes for the patient and the community (Mode 5, Mean 4.43 for both), the results were very positive, with percentages of 90.1% and 88.5% respectively.

Only 29.6% of students responded positively with respect to a desire to work in a rural area after qualifying, with 41% responding negatively, and 29.5% neutral on this item.

Importantly, this Likert item had a mode of 3 or neutral and the lowest mean of the attitude items (Mode 3, Mean 2.7, SD 1.256). Whilst it is acknowledged that this decision is based on many factors, it has been included as an indicator of attitude as it was felt that improved language and cultural competence may be factors which would influence students' decisions about working in rural areas in the future and thus possibly improve rural uptake of doctors.

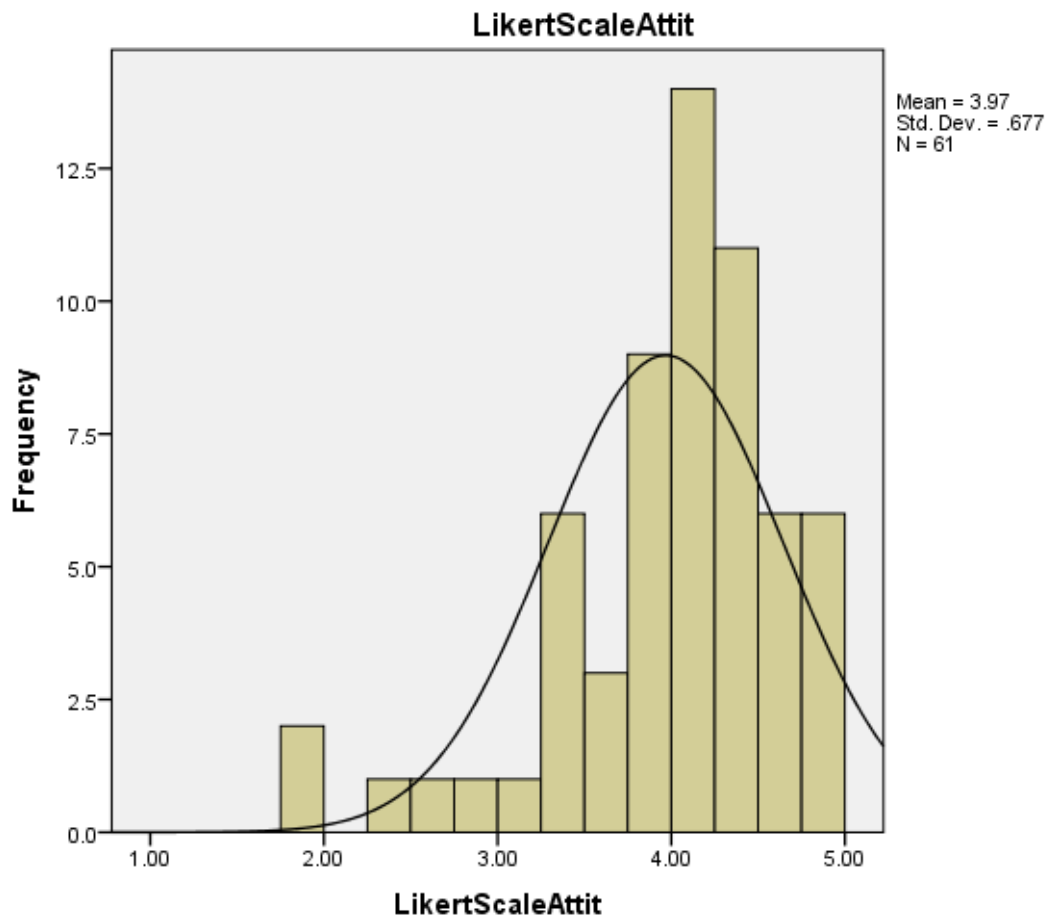
With regard to enhanced student-patient communication (Mode 4, Mean 3.69), 63.9% of the study group felt that such communication was enhanced by using isiZulu in the medical interview.

With regard to enhanced student-staff communication (Mode 3, Mean 3.21), only 36.1% of the cohort felt that such communication was enhanced by their knowledge of isiZulu, in line with the findings regarding practice.

## Likert Scale for Attitude

A 5 point Likert scale was used for the mean attitude score, with 1 and 2 indicating a negative response, 3 a neutral response and 4 and 5 a positive response. For the Likert scale or mean attitude score, the results of the analysis were the following:

**Attitude: Mean 3.96754 (95% CI 3.7940 - 4.1410, p=.000)** (Refer to Figure 1 below).



**Figure 1: Frequency Distribution of Likert Scale (Mean) for Attitude for Cohort (N=61)**

This shows a frequency distribution significantly skewed to the left, with a mean of 3.97, and a clear predominance of positive attitude scores.

### 4.3.3 PRACTICE

In order to measure the practice of isiZulu clinical communication, the Likert items described below were analysed individually. Thereafter, a Likert scale for practice was derived from the five individual Likert items for practice.

Questions 17-19 and 25-26 were used to measure the use of the language and wish to further use the language as components of practice. These items explored student's use of isiZulu language skills in patient encounters in the wards to gather information, or to give instructions or make recommendations to patients, and their use of isiZulu language skills in encounters with staff members. They further explored the student's willingness to build on knowledge acquired and continue the use of isiZulu communication skills whether supported or unsupported.

Table 8 (below) summarises the results with respect to the individual responses to the 5 items which measured students' "practice".

**Table 8: Measurements of Central Tendency: Practice Scores for Cohort in 2012**

<b>Practice Scores (N=61)</b>	<b>Mean</b>	<b>Median</b>	<b>Mode</b>	<b>SD</b>
1. Use in Year 3 for patient history	3.55	4.00	4	1.307
2. Use in Year 3 for patient explanation	3.03	3.00	4	1.402
3. Use in Year 3 in conversation with staff	2.16	2.00	1	1.186
4. Continue isiZulu if supported	3.89	4.00	4	1.112
5. Continue isiZulu if unsupported	3.33	3.00	3	1.044

With regard to use of isiZulu when communicating with patients, the majority (63.3%) of students had used isiZulu when taking a history or gathering information in the third year, but less than half (47.6%) had used it for the purpose of explanation and planning.

With regard to the use of isiZulu to communicate with staff, very few (only 16.4%) of students had used isiZulu when communicating with a staff member in the wards. This item had the lowest mode and mean of the practice items, and was the lowest score overall of the Likert items in the study (**Mode 1, Mean 2.16, SD 1.186**).

Finally, whilst 70.5% of the cohort indicated that they would continue to build on their isiZulu communication skills if supported; only 41% indicated that they would do so unsupported.

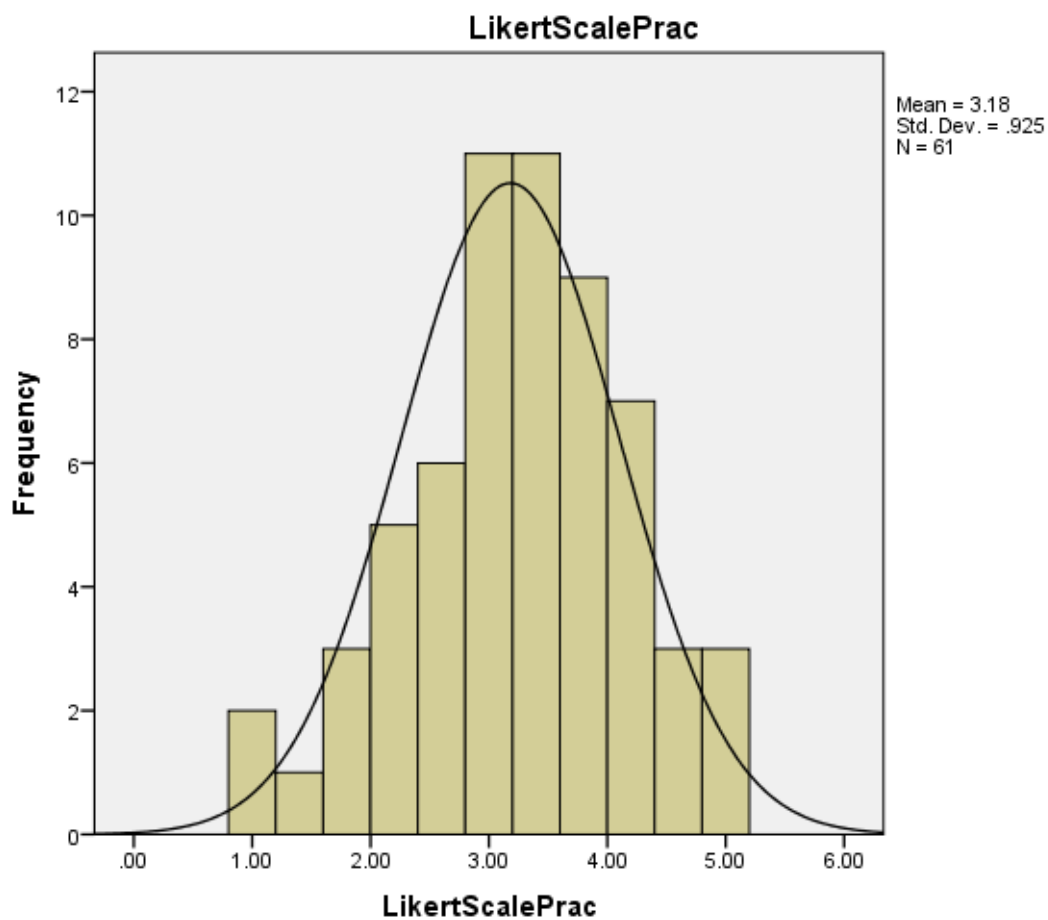
In general, Likert items for practice were lower than those for attitude, and this will be discussed in Chapter 5.

## Likert Scale for Practice

A 5 point Likert scale was used for the mean practice score, with 1 and 2 indicating a negative response, 3 a neutral response and 4 and 5 a positive response. For the Likert scale or mean practice score, the results of the analysis were the following:

**Practice: Mean 3.18033 (95% CI 2.9434 – 3.4172, p=.000)**

(Refer to Figure 2 below)



**Figure 2: Frequency Distribution of Likert Scale (Mean) for Practice for Cohort (N=61)**

This shows a fairly symmetrical distribution, with a lower mean, as reflected in the figure, of 3.18, when a 3-rating is the central point which indicates neutrality.



#### 4.3.4 EXPERIENCE OF LEARNING ISIZULU

The qualitative data for this section was obtained from Question 27, the open enquiry section of the questionnaire. This section gave students in the cohort an opportunity to express their ideas about the experience of learning isiZulu to date in the MBChB programme.

Student responses were analysed thematically. Several themes emerged, as indicated in Table 9 (below). This table includes the positive and negative themes identified and the number of students in the cohort who expressed each theme.

**Table 9: Experiences of cohort (n=53) concerning isiZulu T&L in the MBChB programme (Note: More than 1 comment could be expressed by 1 student)**

<b>Experiences of cohort (n=53)</b>	<b>n</b>	<b>%</b>
<b>Positive comments/ themes</b>		
Helpful/ useful/ beneficial	27	44
Other positive	24	39
Patient communication/confidence improved	9	15
<b>Total</b>	<b>60</b>	<b>98</b>
<b>Negative comments/ themes</b>		
Not helpful	3	5
Other negative	6	10
Patient communication/ understanding difficult	12	20
Difficult/challenging/need additional	16	26
<b>Total</b>	<b>37</b>	<b>61</b>

The major positive theme related to the beneficial aspects of the course. Many students were complimentary about the course structure, resources and delivery. Many enjoyed the interactive aspects of the teaching. An example of a comment related to this aspect was as follows:

*“Very useful content in lectures in first year and information put up on the moodle website. It was useful during clinical methods and selectives.”* (Respondent 78)

Many positive comments related to improvements in communication, especially with regard to communicating with patients in the clinical setting. Specific comments to illustrate this aspect were phrased as follows:

*“The isiZulu course has been very helpful and given me confidence when communicating with Zulu speaking patients.”* (Respondent 17);

*“I feel the Zulu course was extremely helpful and many of the questions that we learnt in the 2010 course were relevant in our hospital situation. I also liked that we had Mrs G... as our teacher, as opposed to someone who spoke Zulu as their mother tongue (sic).”* (Respondent 25); and

*“I thoroughly enjoyed learning isiZulu. I am much more confident when I enter the wards as I know I have some sort of background knowledge in isiZulu.”* (Respondent 51).

Overall, more students were found to have expressed positive than negative themes. An important exception was the fact that, with respect to communication with patients in *isiZulu*, more students found it challenging than students who indicated that their confidence in communicating with patients had improved.

Negative comments related to the degree of difficulty of the language and difficulty with language acquisition, including problems with retention. Some students stressed that the emphasis should be on medical communication as opposed to grammar, and some commented that students experienced problems with medical terminology and phraseology in *isiZulu*, with Respondent 10 stating that even *isiZulu* speakers had encountered difficulties in formally questioning patients. Some students expressed their difficulty with pronunciation

and some in understanding the patients' responses. Many students felt that there was a need for additional exposure to isiZulu language teaching, and the suggestion was made by Respondent 42 that isiZulu should be routinely introduced at school level.

Specific comments concerning the cause of the difficulties experienced related mainly to lack of prior exposure to isiZulu and to learning a language at an older age. Others related to home province and local language, and demands of the medical curriculum. Some comments related to difficulty with language acquisition included the following:

*“Learning a new language at an older age is much more difficult, than been grown up with it (sic).”* (Respondent 5);

*“It is extremely difficult to become fluent or even competent in the language at this late age of my life especially as a medical student other more important subjects rank higher on my priority list.”* (Respondent 16); and

*“I like that KZN included Zulu. It's very good to improve doctors' skills overall. But personally, from another province with minimum exposure to Zulu and with the possibility of returning there, it feels more natural to put my emphasis on actual medicine than learning a completely new language which can be very time consuming.”* (Respondent 27).

#### 4.3.5 RECOMMENDATIONS TO IMPROVE ISIZULU TEACHING AND LEARNING

This qualitative data was obtained from Question 28, the open enquiry section, and was analysed thematically. This section gave students in the cohort an opportunity to express their ideas on recommendations for improving the teaching and learning of isiZulu in the MBChB programme. The themes from this analysis are summarized in Table 10 (below), which shows the recommendations made and the number of students who made each of the recommendations:

**Table 10: Recommendations of cohort (n=48) concerning isiZulu T&L and assessment in MBChB programme (Note: More than 1 comment could be expressed by 1 student)**

<b>Recommendations of cohort (n=48)</b>	<b>n</b>	<b>%</b>
More interaction/practice – real/simulated patient/ other	28	46
More vocabulary/ phrases/ integrated	18	30
Compulsory isiZulu/ classes in Yr2/3/clinical years	16	26
More lectures/ lessons	7	11
More assessments e.g. continuous	7	11
More computer-assisted learning (CAL)	3	5

The major theme in this section related to the suggestion that more opportunities be created in the curriculum for reinforcement of learning by interactions in isiZulu. Students thought they would benefit from interacting with simulated or real patients, as well as with other students and staff. Some students felt that opportunities for speaking to out-patients would be important: Respondent 3 wrote that there was “not enough time or the patients are too ill in the wards to have patience with your slow Zulu (*sic*)”.

Other recommendations related to more lectures or oral sessions and to providing more vocabulary for the students' needs. There were suggestions for various technologies to aid learning, such as isiZulu films, video, audio, mp3, and online or electronic applications.

Several students recommended a compulsory course in isiZulu (as distinct from the single current 1 year module in the first year). Students felt that the teaching and learning of isiZulu should continue through the pre-clinical and into the clinical phase of the programme. Respondent 84 stated, "I feel learning a language should be ongoing and more frequent. ....language is learnt through hearing and speaking, not reading."

Several students alluded to concepts of integration or blending of isiZulu teaching with other areas e.g. Clinical Skills and Clinical Methods.

Some students also recommended more assessments, including continuous assessment, and oral assessments. One student (Respondent 52) recommended that the proficiency test should be made more difficult "as many students who have not attended Zulu classes struggle with preparation for OSCE's and in hospital (*sic*)".

As the current form of assessment in the second and third years is an OSCE format, several students commented on the isiZulu history-taking as assessed in the OSCE. This form of assessment, using standardized simulated patients, has been used since 2004 to assess oral communicative competence in isiZulu.

Thirteen students commented on the incorporation of the isiZulu station in the OSCE. Comments on this practice varied from positive to negative. Those who commented positively on the practice (n=8) seemingly supported the use of an OSCE format and thought it useful to reinforce or refresh their isiZulu knowledge and vocabulary and practice their skills. Some specific examples of positive comments by students are as follows:

*"The OSCE provides a transient incentive to study Zulu but it is beneficial in improving vocabulary for complicated concepts."* (Respondent 32);

*“Having the OSCE isiZulu station is somewhat helpful for basic lines but I think to properly learn and remember and speak more time need to be spent on preparing for the OSCE (sic).”* (Respondent 40); and

*“....the OSCE station helps a lot in refreshing my isiZulu knowledge especially regarding different symptoms.”*(Respondent 69)

Several students felt that additional support was required for the OSCE, and some (n=5) expressed negative comments about this type of assessment. As illustrated by quotes from the students, some students indicated that it was stressful and that they lacked understanding of the patient’s responses. One student felt that the resources supplied allowed students to learn for the OSCE but that students were unable to transfer this knowledge to the clinical setting. Examples of students’ negative comments are as follows:

*“Cramming for an OSCE is not useful at all and it is hard to communicate under such an amount of pressure.”* (Respondent 3);

*“I learnt a few questions by heart in order to pass my OSCE without understanding/acknowledging pts (patient’s) reply (sic).”* (Respondent 42); and

*“Putting up notes allows us to learn for the OSCE but the majority of us don’t implement this at all in clinical work or everyday life.”* (Respondent 49)

These comments overall are somewhat contradictory and by no means conclusive. However, the positive sentiments expressed tend to suggest that the OSCE format for testing isiZulu communication skills could successfully be continued as an assessment strategy provided that ongoing and additional support for language learning is provided. Such activities will encourage students to revise and build on previously studied content which may reinforce past learning and provide a link to the clinical years. Further study needs to be done to assess the effectiveness and impact of the various assessment methods currently in use in reinforcing students’ language learning. Simultaneously, other teaching strategies are being introduced and researched in the teaching and learning of isiZulu.

#### **4.4 SUMMARY**

The findings of the written test and the OSCE marks that were analysed for knowledge of isiZulu, as well as the students' subjective opinions, provide evidence of language learning in the cohort. Their subjective assessment of their ability also showed that they considered themselves as having gained some degree of communicative competence in isiZulu. The Likert items from the KAP survey for attitude showed that the students in the cohort were largely positive about learning isiZulu. However, the Likert items for practice were mainly neutral, indicating that the students were unable to practically implement their isiZulu knowledge in the clinical setting.

The qualitative data in the latter section of this chapter supported and triangulated the data from the KAP survey. Findings from the qualitative data were congruent with the KAP data and appear credible, and the comments by students have assisted in enriching the study by describing some of their experiences and recommendations. All raw data has been preserved, with an audit trail of the thematic analysis. Both positive and negative experiences of students can be used in the future by course teachers and designers for the purpose of reflection on the strengths and weaknesses of the current teaching approach and strategies for assessment.

## **CHAPTER FIVE**

### **DISCUSSION**

#### **5.1 INTRODUCTION**

Language barriers have been identified as obstacles to the provision of good health care (Timmins, 2002; Levin, 2006; Schlemmer and Mash, 2006). Health professional educators in tertiary education have an obligation to train doctors who are able to conduct patient interviews in the mother tongue of the patient population that they serve. However, many students enter the NRMSM with little or no functional proficiency in isiZulu, which is the most commonly spoken language in KwaZulu-Natal.

This study was conducted to determine if the current isiZulu module and T&L initiatives provided students with sufficient skills in isiZulu clinical communication to interact successfully with their patients. The study has shown that, while some language learning has occurred, the language competencies of the students are inadequate for their professional needs, and that further initiatives are required to address this need in a vocation-specific context.

#### **5.2 DISCUSSION**

##### **5.2.1 Discussion of Results**

Most students in the cohort were English first language users with respect to home language and the medium of instruction at school. Many of the students were able to use Afrikaans, but the group had very limited to no functional isiZulu proficiency on entry into the MBChB programme at UKZN. None of the students had received additional exposure to isiZulu other than the T&L at UKZN, indicating that the knowledge of isiZulu that the students in the study demonstrated was acquired exclusively during the course of their studies and due to their exposure to isiZulu at UKZN.



The objective indicators of knowledge were marks for the written test and the OSCE station. Both showed that language learning had occurred. One set of marks compared the students' marks against their previous marks in 2010, and the other compared their marks with the marks of the class as a whole.

The increase in the students' scores in the written test showed an improvement relative to the scores attained in the test written in first year, but the significance of this difference could not be analysed in the form of a paired t-test. Nonetheless, the improvement in the scores is an encouraging finding. It is indicative of some retention of the knowledge acquired in the first three years of the programme, as the students wrote the test in 2012 with no preparation. There was, however, a significant difference between the students' ability to translate from English to isiZulu and *vice-versa*, with a lower mark for the former category, in keeping with the students' early stage of language acquisition.

In addition to the written assessment of knowledge, oral communicative competence assessed in an OSCE station showed no significant difference between the cohort in the study and the class as a whole. This indicated that those students who studied isiZulu at UKZN had achieved a basic level of communicative competence equal to that of the class as a whole for this particular task. This, similarly, is an encouraging finding, but it cannot be extrapolated to imply that the communicative competence in general of the study cohort is as good as that of the class overall. This is because the analysis was based on this particular task only, one of various scenarios for which students had been prepared by means of provision of vocabulary and phraseology on Moodle and voluntary tutorials. However, the importance of this finding is that it suggests that the task-based approach being used currently (refer to Chapter 2) is an effective strategy for teaching medical students, and that further development of relevant resources using this approach would be useful.

The subjective indicators of language ability showed that approximately 64% (n=39) of the cohort considered themselves able to speak some isiZulu at a basic level. This self-rated competence in isiZulu should also be regarded as favourable in view of the fairly limited exposure to isiZulu the students had received. In spite of this rating by students, some students in the study noted difficulty with understanding spoken isiZulu, especially when spoken by mother-tongue isiZulu speakers. Some students commented that they were able to phrase the questions for the patients, but were unable to interpret the answers given. In

addition, more students had used isiZulu in gathering information than in explanation and planning, indicating that the requisite level of communicative competence to counsel patients had not been reached. This deficiency must be addressed by increased exposure to isiZulu T&L in the MBChB programme. Knowledge in terms of the social conventions of language use is necessary and students should be able to interact with and counsel patients, and give clear and comprehensible instructions as necessary in a cross-cultural context (Watermeyer, 2009).

In general, the attitude of the cohort was favourable. Whilst only 59% (n=26) of students were aware of the UKZN Language Policy, the majority of the group claimed to be respectful of the isiZulu language and culture (90.2%, n=55), and acknowledged the need for learning the language (88.5%, n=54). A clear majority of the group (90.1%, n= 55) agreed that language concordant patient interviews were likely to lead to improved health outcomes. However, there were difficulties in putting this into practice, with many practical difficulties cited by students.

Overall, the Likert scale rating for attitude was positive, whilst the Likert scale rating for practice tended to the neutral, indicating that, whilst students show a positive attitude to learning the isiZulu language, the communicative competence currently attained is insufficient to usefully employ the language skills in authentic clinical contexts.

Students' responses to an item exploring their desire to work in a rural area after qualifying showed an overall negative response of 41% (n=25), with 29.5% neutral (n=18). It is probable that language barriers, as well as sociocultural and political factors, would be obstacles to students wanting to work in rural areas after qualifying. It would be valuable to determine whether improving the communicative competence of young doctors would contribute to a better uptake and retention of doctors in rural areas.

The open enquiry section yielded a large amount of useful information on the positive and negative experiences of students. They also made recommendations for the improvement of the T&L of isiZulu.

Many students commented favourably on aspects of isiZulu T&L, its relevance, and its benefits in improving communication with their patients. Others cited various barriers to

language learning or acquisition. These barriers included lack of prior exposure to isiZulu, older age, and lack of exposure and practice i.e. students from geographic areas (provinces in which other African languages are the predominant languages spoken). Other reasons given by students for the difficulties experienced were lack of time to study isiZulu and the demands of the medical curriculum. Also cited were difficulties with pronunciation and retention of language learnt. Interestingly, many students indicate the need for more interaction with isiZulu speakers. With a large percentage of classmates being isiZulu-speaking, it is apparent that opportunities to speak isiZulu to classmates are not used. This is in keeping with personal observations of learners at the NRMSM, where mainly English is spoken, with the exception of the isiZulu mother tongue speakers, who frequently speak isiZulu to one another during class and in social interactions. It is an area which, I believe, should be explored and exploited in the future. An interesting perception of Respondent 82 was that examining isiZulu in the OSCE was unfair, as it placed the minority of the class at a disadvantage. This is a skewed perception as the remaining seven stations in the OSCE are conducted in English. (English is our medium of instruction at UKZN, in spite of the fact that a large proportion of students at the NRMSM speak isiZulu as a mother tongue.) This opinion is probably in keeping with SLA theory on social distance (Schumann, 1976), especially given the political history of SA and the geographical spacing of the different language groups.

It is important that, at all levels within the College of Health Sciences, an encouraging and enthusiastic approach to the incorporation of isiZulu for medical students be fostered to overcome objections, with students being encouraged to recognise the benefits of multilingualism. Concerted efforts must be made to assist students to gain a useful level of second language proficiency in isiZulu, concentrating on communicative competence as the main aim.

### **5.2.2 Language proficiency and the requirements for medical students**

Language proficiency may be defined as the ability to use a language effectively and appropriately throughout a range of social situations. Our task as educators of medical students is for students to achieve a level of language proficiency that allows them (as L2 speakers) to function effectively in clinical encounters in a vocation-specific context.

In terms of second language learning and acquisition, these terms are largely used interchangeably, with the term acquisition implying a more subconscious acquisition and the term learning being associated with structured teaching of the language (Krashen, 1981). The term communicative competence is often used instead of language proficiency, and implies an ability to communicate in an everyday situation. For the purposes of medical students' training, communicative competence may be achievable in considerably less time than it takes to achieve full cognitive academic language proficiency (CALP) in a second language, which is known to take many years. Whilst it is probably not feasible to expect that a student entering medical school with no knowledge at all of isiZulu would be able to achieve full CALP, it would be entirely possible in a well-structured course over the 6-year programme to achieve a satisfactory level of communicative competence which would allow the student to communicate effectively and safely with patients. For the purposes of this study, emphasis is on medical students obtaining a level of communicative competence which is fit for purpose in terms of their chosen profession as doctors, with the LSP approach referred to in Chapter 2 ideal to cater for the specific requirements of the medical student.

To become competent communicators, learners need to speak (output), listen and understand (comprehension) and interact with patients (interaction) (Krashen, 1981; Long, 1981; Swain, 1993). With current constraints, and to improve learners' abilities, instruction should concentrate mainly on improving what David Nunan calls the "Cinderella skill" of listening, often overlooked as learners concentrate on speaking and writing a language (Nunan, 1999). It is hoped that the current initiatives in the College in developing isiZulu videos for learners will address this gap, particularly with regard to comprehension, as students will be able to access the content repeatedly to reinforce learning. As a former clinician with experience in urban and rural settings in KZN, I feel that it is important to appreciate that emphasis on grammatical and syntactical correctness may be less important than patient-centredness. It is always a delight to experience the smiles and obvious relief of monolingual isiZulu patients when greeted in their mother tongue. In spite of having learnt isiZulu informally myself, an ability to communicate with my patients has added immeasurably to my effectiveness and professional satisfaction as a medical practitioner.

It is thus necessary to find practical ways to develop resources and advance the pedagogy of isiZulu to produce learners who are confident as communicators, particularly in using the oral

skills acquired. Process skills need to be developed in L2 learners which will give them sufficient confidence to use the language skills, and further build on and hone their abilities in the clinical context, as mentioned by Ellis in Chapter 2, in this way simultaneously building the relationship and improving rapport with their isiZulu patients (2004). Specific process skills taught in the Calgary-Cambridge method, such as repetition and paraphrasing, can be usefully employed in L2 interviews. Students can be taught useful methods to simplify questions and “chunk” relevant content into easily-mastered phrases and sections related to commonly occurring problems encountered in day-to-day practice.

In designing the necessary teaching interventions, it is necessary to relate back to the theories in L2 acquisition and examine trends in second language teaching and learning. It is important to take into account that SLA goes through several stages – from pre-production, to early production as vocabulary is developed, to speech emergence, and then through intermediate to advanced fluency. SLA is a complex process which involves mastery of grammar and syntax, communication in terms of production and comprehension of language, and the ability to read and write a language. As mentioned, experts vary widely in their estimates of the duration of this process, but it is known to be a lengthy process. Children, for example, require extensive input (Ellis, 2008), and take between two and five years to become grammatically competent in a language.

The process of language acquisition is affected by numerous factors – including innate ability, age at which a learner is exposed to the language for the first time, and the duration of the exposure. Other factors which may affect the process are the nature of the learning situation, the motivation of the learner, and social interaction. There will be considerable variation depending on the circumstances. Theorists refer to the provision of comprehensible input in the Input Hypothesis (Krashen, 1981), output in the Output Hypothesis (Swain, 1993) and interaction in the Interaction Hypothesis (Long, 1981). Sociocultural theory and acculturation relate to the environment and social interactions (Schumann, 1978; Menezes de Oliveira e Paiva, 2008). A most useful theoretical framework mentioned in Chapter 2 and referred to as the AGES model is based on neuroscience research into learning and retention of knowledge (Davachi *et al.*, 2010). These theories of SLA will be referred to in Chapter 6, in which recommendations will be made for the development of a vertically integrated isiZulu course in the MBChB programme.

As mentioned in Chapter 1, it is also important to include cultural competence as a desired outcome for students. This can be achieved by synchronising the introduction of cultural awareness with language teaching. In strengthening and making a curriculum relevant to 21<sup>st</sup> century South Africa, cultural concepts related to health should be embedded into language teaching and learning. This will enable learners to be sensitised and reflect upon cultural practices, and thus improve their insight into the various cultural practices that impact on the health of our patient population.

A global trend has emerged for professionals to work in diverse, multicultural environments. Accordingly, there is an increasing necessity for professionals to equip themselves with skills in intercultural practice. In an article which reflects on the experiences of professionals in such environments, the authors express the opinion that these skills are prerequisites to professional knowledge and competence, and recommend that ensuring that skills in intercultural practice are developed should be a core function of tertiary institutions (McAllister, Whiteford, Hill, Thomas and Fitzgerald, 2006). In South Africa, with its political history of apartheid and discrimination against persons on the basis of race, it is even more imperative that these skills are included as competencies in medical education and as a social and professional responsibility of doctors. By heightening cultural awareness and improving cultural competence in medical students, the aim should be to produce young doctors who are socially responsive to the health needs of our population (Van Heerden, 2013). One would hope that the acquisition of basic competencies in isiZulu would encourage students to engage further in social discourse with isiZulu-speaking peers and, in this way, further improve their language ability and cultural competence, as language barriers are overcome. Professor Renuka Vithal, Deputy Vice Chancellor of UKZN and Chair of the UKZN Language Board, stated recently in an article in the lay press that, "...in a country that continues to be divided on the basis of linguistic identities, language should serve to bring diverse learning communities together and promote social cohesion" (Jansen, 2013).

As described in Chapter 2, the World Health Organisation (WHO) has highlighted the obligation of academic institutions to direct their efforts in teaching, service and research towards prioritising the needs of the communities they serve. The Lancet report on the education of health professionals recommends adopting competency-based medical curricula

that are responsive to the needs of local communities, regions or countries in the twenty-first century (Frenk *et al.*, 2010).

The Health Professions Council of South Africa (HPCSA) has recommended communication as a core competency for medical students (HPCSA, 2012). In an article by Van Heerden (2013, p.22) on addressing the health needs of SA's population, he describes the way forward for health education and states that, "Introducing effective transformative learning principles and practices into curricula should enable institutions to train health professionals.....that will be able to act as agents of change for social good and moreover be equipped with the core competencies required to adequately address the health needs of SA's people, not only in the urban areas but in the deep rural areas as well".

The UKZN Language Policy and Plan, referred to in Chapter 1, detail the inclusion of isiZulu as a compulsory language at the institution. The Language Plan for the university, approved in August 2006, is currently in Phase 1 (2008 - 2018), with the development of isiZulu in the institution being primarily the responsibility of the College of Humanities. In mid-May 2013, it was officially announced that UKZN will be introducing isiZulu as a compulsory subject for all undergraduate degrees. One of the areas targeted for action by 2013 is the provision of professional or vocation-specific content for undergraduates (UKZN, 2006).

At the NRMSM, an existing isiZulu module is already in place. Efforts should be directed to strengthening and building on the existing isiZulu T&L already developed for medical students to consolidate the early gains from the first year of study. Thereafter, it will be necessary to progressively build on these gains throughout the programme. Relevant vocation-specific content should be introduced in an integrated and step-wise manner as the student progresses through the curriculum in order for the earlier gains to be sustained (Matthews and Gokool, 2012). Recommendations for teaching approaches for inclusion in the curriculum are discussed in Chapter 6.

### **5.3 SUMMARY**

This chapter discussed the results of the study. The results show that, while medical students show a positive attitude to learning isiZulu, the functional proficiency attained with current initiatives is insufficient for them to communicate effectively and safely in the clinical setting.

SLA and basic communicative competence are discussed, in the context of training doctors who are relevant to the needs of the local population in the 21<sup>st</sup> century. As part of social accountability, the NRMSM must implement WHO and HPCSA guidelines, and ensure that the UKZN Language Policy and Plan are implemented appropriately.



## **CHAPTER SIX**

### **CONCLUSION & RECOMMENDATIONS**

#### **6.1 INTRODUCTION**

This study aimed to determine whether the current isiZulu module and T&L initiatives provided students with sufficient knowledge and skills in isiZulu clinical communication to interact successfully with their patients. It has provided information on the knowledge, attitude and practice of isiZulu clinical communication in third year students. As discussed in Chapter 5, students' knowledge showed improvement. In general, the attitude of the students was favourable towards learning isiZulu, but students identified various barriers to learning and many were unable to use the language in a practical way in the clinical setting (practice). Students described their experiences and made various recommendations for improvement, which triangulated the KAP data and enriched the study findings.

#### **6.2 OUTCOME OF STUDY**

In analysing aspects of clinical communicative competence, this study highlighted the gains achieved by a single isiZulu module in the first year of study, and by the innovations included in this module and in the second and third years in 2011-2012. Simultaneously, the inadequacy of a single module in terms of SLA for adult learners who require the language for professional purposes is demonstrated. Whilst it has been demonstrated that some language learning has occurred, the level of functional proficiency is not at a level which allows students to provide safe and effective health care in isiZulu.

#### **6.3 RECOMMENDATIONS**

##### **6.3.1 Recommendations for curriculum development**

The experiences and recommendations of students in the study have yielded some useful insights. As millennium students, students have asked for T&L strategies to include the use of modern and innovative technologies. As the UKZN plans to increase its intake of medical students to the programme, it will be necessary to take cognisance of the financial constraints

and the limitations in terms of human resources (available isiZulu tutors and lecturers), so the use of these strategies is likely to prove increasingly valuable to course designers and learners alike.

In summary, the main recommendations made by the students for isiZulu T&L and its assessment were for:

- 1) a compulsory course in the language extending into the clinical years;
- 2) more opportunities for student interaction in isiZulu;
- 3) integration of isiZulu teaching with other activities;
- 4) more teaching sessions and more assessments; and
- 5) the use of technology to supplement and enhance SLA in isiZulu.

From the recommendations made by students and findings of the study, it is suggested that the existing proficiency test be abolished in favour of an approach requiring all non-mother tongue isiZulu students to enrol in a compulsory isiZulu module to acquire the requisite skills and knowledge. This strategy will be in keeping with the UKZN Language Plan already being implemented at the institution.

Whilst it is valuable to take note of students' recommendations, further insightful planning and implementation in consultation with the relevant disciplines and experts in L2 curriculum development will be necessary to address the aims of providing vocation-specific content to medical students as it relates to the professional requirement of the medical practitioner.

As described in Chapter 2, SLA researchers are not always in agreement on methods of SL T&L. However, the general guidelines outlined by researchers such as Ellis (2008) have been considered in the tentative outline recommended for the medical curriculum.

It is recommended that those responsible for developing the T&L strategies in the MBChB programme develop a carefully designed and vertically integrated isiZulu course which starts in the first year and thereafter is integrated into the pre-clinical modules and clinical blocks. This will allow isiZulu T&L to extend throughout the six years of the MBChB programme, and provide part of the practical and vocational training of the medical students. Allowance should be made for variations in students' abilities and the course should cater for self-study

using the various teaching methods and technologies. The course should be structured to capture the interest of students and equip them with the necessary language skills and cultural knowledge to deal with common conditions mentioned in the introductory chapter, such as chronic non-communicable diseases (e.g. hypertension, diabetes) or communicable diseases (e.g. human immunodeficiency virus (HIV) and tuberculosis).

### **Some principles for SL curriculum design**

It is suggested that course designers draw on the experiences of local and international universities offering L2 courses in their curricula to enable students to cope in multilingual societies.

The SANTED project at UKZN offers useful insights. In this regard, the course for medical students can be guided on course objectives by those developed for professional needs of students, as follow (Ndimande-Hlongwa *et al.*, 2010, p.149):

- *“To understand and be able to use frequently used vocabulary, expressions and discourse in professional contexts.*
- *To improve communicative competence in professional contexts.*
- *To raise awareness of cross-cultural differences in the professional world and to develop intercultural competence.”*

As well as this initiative and other initiatives at other SA universities, universities internationally are dealing with multilingual and multicultural societies and have experience in second language programmes. For example, some medical schools in the United States are including longitudinal medical Spanish training in their programmes (Reuland, Frasier, Slatt and Aleman, 2008), to enable English-speaking doctors to provide health care in Spanish to their Spanish-speaking patients.

### **Aims of the course**

It is envisaged that such a course would emphasize oral communicative competence, with students being expected to acquire the requisite language skills and cultural competence to safely and effectively take a history or counsel patients in the clinical setting.

The general aim of the course should be to improve language skills and cultural competence, and promote transformative learning. The course should integrate the T&L of isiZulu with the general teaching of clinical communication skills and the clinical disciplines. In this way, isiZulu will be seen as an integral as opposed to an optional requirement for clinical communication and medical practice in KZN. In teaching students the principles of transformative learning, it is important that they are continuously sensitised to the benefits of good communication and language concordant patient interviews. In this framework, students need to realise that, in terms of the HPCSA competencies mentioned in Chapter 2, becoming a (relevant) expert health care practitioner is strongly associated with the other competencies, such as communicator, collaborator and health advocate. By gaining the knowledge, skills and attitude necessary to be linguistically and culturally competent practitioners, they will embody the true principles of what makes a good doctor and be prepared for transforming society as agents for social change.

Following general principles used in teaching communication to medical students (Von Fragstein, Silverman, Cushing, Quilligan, Salisbury and Wiskin, 2008), and using the format of current communication teaching in the medical school, recommended learning outcomes for isiZulu communication are to ensure that students have acquired:

- 1) the necessary knowledge and skills for basic interpersonal communication skills to interact effectively with monolingual (or semi-bilingual) isiZulu patients and their families;
- 2) the requisite terminology to conduct the standard medical interview;
- 3) the necessary phraseology to counsel patients on health promotion and common medical conditions;
- 4) appropriate strategies and language to deal with commonly encountered challenges in communication such as breaking bad news and bereavement counselling; and
- 5) sufficient cultural awareness and understanding of cultural differences to guide their practice when dealing with issues of illness or health-seeking behaviours.

### **Suggestions for educational strategies and resources**

It is anticipated that a detailed needs analysis would be required using input from the language discipline, disciplines within the schools and medical students to decide on the

requirements for the course. The current approach to teaching in the first year, with the use of elements of CLT and TBLT should be continued, as this has shown favourable outcomes. The current initiatives for the development of isiZulu terminology platforms in the College will also be valuable resources for learning.

A participative approach should be encouraged, and students should be given opportunities to engage creatively with the T&L of isiZulu. Role players in this process could include isiZulu mother-tongue students to assist with making suggestions and designing the necessary inputs for the course. In this way, specific language requirements for medical students' practice would be highlighted.

It is likely that an approach such as the one described by Ngwenya (2009) to teach Setswana as an additional language to adult learners would be highly suitable for this purpose. In that context, the author used what was referred to as a negotiated nuanced task-based communicative syllabus which was premised on the principle that there was no single methodology sufficient on its own and that a negotiated syllabus would best serve the learners' needs.

Educational trends in L2 teaching and learning indicate that learning strategies should include elements of didactic coursework teaching, and various other curricular elements to provide interest and reinforcement of subject matter. These should be spaced appropriately, allowing learners multiple opportunities to refresh and build on knowledge.

A further teaching strategy used successfully in L2 language learning is simulation-based education (SBE). This type of programme has become commonplace in many universities all over the world, and some universities, such as McMaster University (McMaster University, 2013) and others have dedicated centres for simulation-based learning. Some universities have communication skills laboratories; for example, the University of Ottawa uses simulated patients in order for francophone medical students to conduct medical interviews in French whilst being observed by clinicians trained in feedback. Filming of students provides opportunities for learning through review of the material, and outcomes from this project have been favourable (Drouin and Rivet, 2003). The use of standardised simulated patients in isiZulu teaching at UKZN has already shown promise and should be continued and strengthened with initiatives such as the examples mentioned in this paragraph.

Modern technologies available to supplement learning should be maximised as strategies for T&L, as they are likely to be embraced by students. Priority should be given to developing audio-visual media relevant to our clinical context, with isiZulu language videos of commonly encountered clinical scenarios being made readily available to students at all teaching platforms within the teaching complex. This development should be implemented in conjunction with the current initiatives to develop computer-assisted language learning. Pilot studies by staff are already in progress in the College of Health Sciences on the use of isiZulu videos (Diab, Matthews and Gokool, 2013), and there are initiatives for the development of computer-assisted language learning (CALL) programmes (Gokool, 2011). These initiatives have not been fully implemented and are still in development. As such, these resources have not yet been evaluated. Accessibility is a key factor and it is the intention that students should ultimately access various resources via hand-held devices such as smartphones or tablets. An example of such a cellular phone application is “Mobile Xhosa for Health Practitioners”, which was developed by a UCT medical student and can be accessed via cellular phone (Moolla, 2013) . Such applications are likely to carry a high level of acceptability by students, who engage freely with similar technologies on a daily basis.

Sociocultural seminars should be strategically placed in the programme to highlight cultural issues in health care and sensitise students to specific topics of cultural significance. Other strategies to improve cultural competence could include discussion groups or reflective portfolios which provide opportunities for critical incident reflection (McAllister *et al.*, 2006), using incidents of relevance to explore health and illness topics of relevance to the isiZulu culture.

Immersion experiences have been used successfully abroad and locally in L2 learning, and could be integrated within the programme (Davachi *et al.*, 2010). Possibilities exist to integrate such experiences within the existing Selectives modules in the second, third and fourth years, and in the rural attachment of the final year. These could provide rich opportunities for simultaneous teaching and learning of medical content and the isiZulu language.

Other methods of incorporating isiZulu language learning with clinical rotations would be to provide isiZulu tutors at the bedside, where students could work assisted in taking histories and providing information to patients in isiZulu. A further opportunity exists for a “buddy

system” to be used, in which a non-isiZulu speaker is partnered with an isiZulu speaker in clinical blocks to overcome problems related to lack of human resources. Such “buddies” operating together as a team would be able to assist each other with language and discipline content learning. This would result in experiential isiZulu learning taking place as students rotate through the clinical rotations in local hospitals and in rural health locations while engaged in community based projects, and would assist students in preparing for the more challenging commitments of internship and community service. Such systems have been used successfully in various settings , an example of which is in exchange programmes for foreign students in Europe (Erasmus Student Network, 2013), where “buddies” are assigned to visiting foreign students to assist them in acculturating to the new language and culture of the host country.

The spacing of the various offerings or experiences should be considered carefully, so that information is introduced appropriately in terms of topics and their relevance to the students’ level of knowledge and clinical experience.

### **Assessment – current and future**

Traditionally, there has been a belief in education that assessment drives learning. This stems from Biggs’ concept of “constructive alignment” (Biggs, 2003), which starts with the concept that the learner constructs his or her own learning through the learning activities in the programme. In essence, it refers to the fact that the learning activities must be appropriate to achieving the desired learning outcomes. In such a curriculum, the teaching methods and assessment tasks should be aligned with the learning outcomes which are to be achieved. This is said to promote higher order learning processes and optimise conditions for quality learning.

In higher education, we have been encouraged to diversify assessment and use innovative approaches to ensure that learning takes place appropriately. Traditionally, summative and formative assessments are included in curricula, and there is an increasing swing towards competency-based assessments. The emphasis should be on assessing such competencies in an integrated and longitudinal fashion with the use of various methods and the provision of feedback to students on their progress. Students with unsatisfactory performance should be identified and supported (Epstein, 2007).

Indications from students in this study are that it is necessary for isiZulu to be offered as a compulsory course that includes regular assessment to ensure that L2 learning will receive the attention necessary to achieve an appropriate level of communicative competence as second language learners.

Regular formative assessments in isiZulu in the curriculum should be included, strategically placed at intervals to ensure that prior knowledge is reinforced and extended.

Summative assessment in the first year is currently in the form of a written and oral examination.

For the second and third years, due to the constraints of examining large numbers of students, the OSCE assessment should be strengthened and supported by isiZulu tutorials and the use of well-trained standardised simulated patients and additional resources for T&L. In this form of assessment, a desirable aim should be that the duration of the OSCE station be lengthened to allow a more detailed assessment. Emphasis in this phase should be on gathering information and interpreting the patient's responses, particularly the latter, as students broaden their content knowledge of the isiZulu language and of terminology related to health and illness.

Assessments in the clinical years should assess students in the clinical settings in which they will ultimately find themselves working, and to ensure that students reach the minimum standards required for functional proficiency in terms of communicative competence for graduates. In-block formative assessments would stress the necessity to learn the language and implement its use in the authentic clinical setting. Summative assessments to prove functional proficiency could be achieved initially by including at least one case in selected clinical exams in which the student is required to take a history in isiZulu and interact with an examiner on the information obtained from the patient i.e. a simple management interview format. Alternatively, students could be assessed as an exit competency in an oral form in an OSCE setting using an interaction with a standardised isiZulu patient for an objective and comparable assessment. This assessment should comprise a structured interview, including basic forms of address, gathering information and some interaction with the patient in the form of simple counselling or a management plan in isiZulu.



## **Monitoring and evaluation**

It is important that a strong element of action research and monitoring be introduced to inform future curricular reviews. Teaching strategies should be monitored by means of qualitative evaluations and functional proficiency assessments to rate students' abilities, particularly in terms of oral communicative competence, as this would be the primary aim of the course in its initial stages. These evaluations would provide feedback to improve the teaching strategies for isiZulu T&L and assessment.

The recommendations for the development of isiZulu teaching and assessment in the MBChB programme and the rationale for the various teaching or assessment strategies are summarised in Table 11 (see next page).

**Table 11: Summary of Proposed Strategies for T&L and Assessment of isiZulu in MBCbB Programme & Rationale for the Proposal**

<b>Phase</b>	<b>Teaching and Learning</b>	<b>Objective</b>	<b>Theory</b>	<b>Recommendation for T&amp;L</b>	<b>Recommendation for Assessment</b>
<b>Phase I (Year 1)</b>	isiZulu module	To learn basic grammar and syntax To learn basic vocabulary To master basic social conventions such as forms of address and greetings	Neurocognitive theory Input hypothesis Sociocultural theory	Didactic coursework Basic on-line resources and isiZulu videos	Written  Oral
<b>Phase II (Years 2 &amp; 3)</b>	Integration with communication skills teaching in the modules	To learn vocabulary specific to the systems as they are studied To be exposed to the clinical interview in tutorials	Neurocognitive theory  Sociocultural theory  Acculturation	Medical terminology isiZulu videos of the clinical interview – systems-based Socio-cultural topics – lectures/ Discussion groups Immersion experiences – in Selectives	OSCE format – strengthen assessment format with standardised patients   Critical incident reflection in Selectives report
<b>Phase III (Years 4, 5 &amp; 6)</b>	Integration with clinical teaching in the clinical blocks	To become proficient in BICS in the clinical setting in: 1) gathering information 2) management plan/ explanation and planning 3) common challenges in communication e.g. breaking bad news	Neurocognitive theory Sociocultural theory Interaction/ Output hypothesis	Access to all on-line resources Socio-cultural topics Bedside tutorials or tutorials in the clinic or out-patients setting (clinical tutor/buddy system)	Reflective portfolio Case in isiZulu in selected clinical exams Exit competency OSCE station – management interview

### **6.3.2 Recommendations for research**

As new strategies in T&L of isiZulu are implemented, it is imperative to conduct research into the teaching, learning and assessment of isiZulu in the medical curriculum at the UKZN. Evaluation of the impacts of the various initiatives implemented will, of necessity, be an integral part of the process of the development of isiZulu language T&L in a vocational context within the Schools and the College of Health Sciences and should ultimately include research into patient perspectives and health outcomes.

Further research in SA on the experiences of patients, medical students, doctors and other HCWs across language barriers is necessary. Studies in KZN should explore the effect of health care workers' competence in isiZulu, when treating isiZulu-speaking patients, on the areas such as quality of and access to health care, treatment adherence, patient satisfaction and health outcomes.

### **6.4 SUMMARY**

The study explored and described the knowledge, attitude and practice of a third year cohort of students who were taught communicative isiZulu language skills in their first year and who were currently (after a two year period) needing to use the skills acquired to interact with patients in the wards during the Clinical Methods course. It has contributed to a better understanding of isiZulu clinical communication T&L at UKZN's medical school within the College of Health Sciences.

The students' descriptions of their experiences and recommendations related to the teaching and learning of isiZulu have enriched our understanding of their needs, challenges and language requirements for effective patient encounters in public hospitals and fieldwork placements in the KwaZulu-Natal. The study has also provided an indication of students' willingness to learn isiZulu as a language, with the positive attitudes measured possibly indicating that they have come to a better understanding of the cultural nuances which underlie the necessity for the practical ability to use the isiZulu language in the clinical setting.

The study has provided evidence that supports the need for a more longitudinal approach to T&L isiZulu in order for students to attain the requisite communicative competence for safe and effective clinical encounters.

The recommendations in this chapter relate to strengthening the delivery of teaching, learning and assessment of the isiZulu language and culture in the MBChB programme at the NRMSM. The isiZulu module of the first year should be fully supported, including the current approach using LSP and TBLT. A well-designed vertically integrated isiZulu course should be implemented at all levels from the pre-clinical to the clinical phase. The goal would be to design a course in consultation with the relevant disciplines, which, within the constraints of the 6-year programme, would have the most impact on the L2 learning of students.

The aim of such curricular interventions would be to improve the core competencies of our graduates and to implement the UKZN Language Policy and Plan. These initiatives would support the promotion of multilingualism and the active cultivation of respect for diversity in language and culture. Teaching and learning strategies aimed at improving knowledge, attitude and skills of students with respect to the isiZulu language and culture would also help to address the inevitable racial bias in health care delivery that exists due to language and cultural barriers. Ultimately, it is hoped that they would help to address health disparities and improve health outcomes at individual and public health levels.

In this way, the T&L of the isiZulu language and culture during vocational training would contribute to the desired outcome of transformative learning which produces graduates with communicative and cultural competence which is fit for purpose for their chosen professions as doctors. These graduates, using a more culturally-sensitive patient-centred approach in their practice of medicine, would be better equipped to address the health care needs of our local population. Firstly, they would be able to contribute to improved access for patients in KZN to safe and effective health care in the primary language of the patient population, which may contribute to improved patient satisfaction. Secondly, it is hoped that the benefits of this approach would encourage graduates of the NRMSM to act as agents for social change who would promote social cohesion and be willing to play a part in overcoming the many challenges in health care they will encounter when they enter the community and SA's health system as health care practitioners.

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# Appendices

## Appendix 1

- Consent for Study from Humanities and Social Sciences Research Ethics Committee
- Request for Amendment to Study Title
- Consent for Amendment to Study Title

## Appendix 2

- Information for Participants
- Consent Form
- Questionnaire
- *isiZulu* Written Test

## **Appendix 1**

- Consent for Study from Humanities and Social Sciences Research Ethics Committee
- Request for Amendment to Study Title
- Consent for Amendment to Study Title

## **Appendix 2**

- Information for Participants
- Consent Form
- Questionnaire
- *isiZulu* Written Test



26 September 2012

Dr Margaret G Matthews (207524495)  
School of Nursing and Public Health  
Howard College

Dear Dr Matthews

Protocol Reference Number: HSS/0974/012M  
Project Title: Knowledge, Attitude and Practice of isiZulu Clinical Communication in a Third Year Cohort of Medical Students at the University of KwaZulu-Natal

**EXPEDITED APPROVAL**

I wish to inform you that your application has been granted Full Approval through an expedited review process:

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years.

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

Yours faithfully

.....  
Professor Steven Collings (Chair)  
/ms

cc Supervisor: Dr J van Wyk  
cc Academic Leader: Professor M Mars  
cc School Admin: Mrs Caroline Dhanraj

Professor S Collings (Chair)  
Humanities & Social Sc Research Ethics Committee  
Westville Campus, Govan Mbeki Building

Postal Address: Private Bag X54001, Durban, 4000, South Africa

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

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





Nelson R Mandela  
School of Medicine



UNIVERSITY OF  
KWAZULU-NATAL

Tel No: 031 – 260 4611/ 4752

**The Chairman**  
**Humanities & Social Sciences Research Ethics and Postgraduate Committees**

**Dear Sirs**

**PERMISSION TO AMEND TITLE OF STUDY ETHICS NO HSS/0974/012M**

I wish to request permission to amend the title of the study approved under the ethics number above. This has been discussed with my supervisor, Dr Van Wyk, who has given her permission. The reason for the change of title is that the study involves more than the KAP survey in that it also details the experiences of students and makes recommendations for improvement of the teaching and learning of *isiZulu*, all research objectives included in the original study aims, but not well-reflected in the original title.

The original title of study as approved was, **“Knowledge, Attitude and Practice of *Isizulu* Clinical Communication in a Third Year Cohort of Medical Students at the University of Kwazulu-Natal”**.

The amended title being requested is, **“Vocation-Specific *Isizulu* Language Teaching and Learning for Medical Students at the University of Kwazulu-Natal”**.

Many thanks for your consideration.

Yours faithfully



**Dr M G Matthews (STUDENT NO 207524495)**



**Dr J Van Wyk (SUPERVISOR)**  
**6<sup>th</sup> June 2013**



13 June 2013

Dr MG Matthews  
Student No 207524495  
Department of Public Health Medicine  
School of Nursing & Public Health

Dear Dr Matthews

RE: AMENDMENT TO TITLE OF PROTOCOL

Your application for approval of amendment to your protocol title has been noted and approved.

Please be advised that this amendment requires approval from the Biomedical Research Ethics Committee. If you have already submitted this to them kindly send us a copy of their response.

Should you require any further information kindly contact our office.

Kind Regards

Mrs Devi Arumugam  
Postgraduate Administrator

---

**Postgraduate Administration**  
**School of Nursing and Public Health**  
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**Founding Campuses:**

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-  Howard College
-  Medical School
-  Pietermaritzburg
-  Westville

**TITLE OF STUDY**  
**Knowledge, Attitude and Practice of *isiZulu* Clinical Communication in a  
Third Year Cohort of Medical Students at the  
University of KwaZulu-Natal**  
**Information for Participants and Consent to Participate in Research**

**Information for Student**

**Humanities and Social Science Research Ethics Committee**  
University of KwaZulu-Natal

**Ethical Approval No: HSS/0974/012M**

Dear Respondent

I am conducting a survey that investigates **Knowledge, Attitude and Practice of *isiZulu* Clinical Communication** in the MBChB curriculum as part of my Masters in Public Health in the School of Nursing and Public Health, University of KwaZulu-Natal. The results of the study will be used to improve the teaching and learning of *isiZulu* in the MBChB programme.

You are invited to participate in this research study, which is a survey of knowledge, attitudes and practices of *isiZulu* communication. You are requested to complete a questionnaire and do a short written test which should take approximately 45 minutes. Your mark for the *isiZulu* communication station in the Objective Structured Clinical Examination (OSCE) in 2012 will also be included as an indication of your communicative competence in *isiZulu*. Any information obtained in this study that may be identified with you will be anonymised and remain entirely confidential. In any written reports or publications, no individual will be identified and only group data will be presented.

You are being informed about the study by the principal investigator. Please note that all data collected will be stored under lock for a period of 5 years and then destroyed. If you have any questions about the research, please call or e-mail me (the researcher), Dr M G Matthews ([matthewsm@ukzn.ac.za](mailto:matthewsm@ukzn.ac.za)), or my supervisor Dr J van Wyk, ([vanwykj2@ukzn.ac.za](mailto:vanwykj2@ukzn.ac.za)).

Your participation in this research is voluntary and you are free to withdraw your participation at any stage and for any reason. You will not be penalized or lose benefits if you refuse to participate or decide to stop at any time. If you agree to participate, you may request a signed copy of this document.

Thank you, in advance, for your participation.

**Dr Margaret Matthews (Researcher)**

School of Clinical Medicine  
College of Health Sciences  
Telephone: 031 2604611/4752  
[matthewsm@ukzn.ac.za](mailto:matthewsm@ukzn.ac.za)

**Dr J van Wyk (Supervisor)**

Teaching and Learning Office  
College of Health Sciences  
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[vanwyk@ukzn.ac.za](mailto:vanwyk@ukzn.ac.za)

**Consent to Participate in Research**

**Declaration by student:**

**I.....(full names of participant)  
hereby confirm that I understand the contents of this document and the nature of the research  
project, and I consent to participating in the research project.**

**I understand that I am at liberty to withdraw from the project at any time, should I so desire.**

\_\_\_\_\_  
**Signature of Participant**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**Print Name and Surname**

\_\_\_\_\_  
**Print Student Number**



## QUESTIONNAIRE

Thank you for participating in this study. This questionnaire is to be read in conjunction with the document entitled “Information for Participants and Consent to Participate in Research”.

**Please note: All information contained in this document is confidential.**

### Instructions for completing the questionnaire:

1. The questionnaire will be explained, and assistance provided in its completion.
2. Please answer **all** questions as accurately as possible using a tick (✓).
3. Please print your answers clearly with a pen.
4. If you are uncertain of an answer, you may state “Not Known”.

**Date of completing questionnaire:** \_\_\_\_\_

### PART A

#### PERSONAL INFORMATION

<b>Respondent Number</b>	
<b>1. Age</b>	
<b>2. Gender</b>	
<b>3. Home province (SA Residents) - see list below</b>	
<b>4. Home country (Non-SA Residents) eg Lesotho</b>	
<b>5. Home language: English, Afrikaans, isiZulu, isiXhosa, Hindi, other (specify)</b>	
<b>6. Language of Learning and Teaching (LoLT) at your last school</b>	
<b>7. Studied Zulu to Matric/equivalent Yes/No</b>	
<b>8. Any additional isiZulu studies or exposure since 2010 other than that provided at NRMSM Yes/No – If yes, explain briefly</b>	

#### Notes:

Home province if resident in RSA (KZN, E Cape, W Cape, N Cape, Free State, Gauteng, North West, Limpopo, Mpumalanga)

Home language: English, Afrikaans, isiZulu, isiXhosa, Hindi, other (specify)

#### 9. Language competency

Please mark which languages you are able to use (speak/ read/ write) with understanding (even if you are not fully proficient), in a medical interview or consultation eg taking a history, reading a referral letter in isiZulu, making notes in a file.

Language competency:	SPEAK	READ	WRITE
a. English			
b. Afrikaans			
c. isiZulu			
Other languages (specify)			
d.			
e.			

## PART B

Please answer using the Scale 1-5 to indicate your agreement with each of the statements in Items 10-26.

- 1= Strongly disagree/ not at all  
 2= Disagree/ very little  
 3= Neither agree nor disagree/ neutral option  
 4= Agree / somewhat  
 5= Strongly agree/ a lot

10. I am aware of the UKZN Language Policy to develop the use of *isiZulu* as a language of instruction and communication.

1	2	3	4	5
---	---	---	---	---

11. I support the development of respect for the *isiZulu* language and culture.

1	2	3	4	5
---	---	---	---	---

Answers questions 12-16, by reflecting on your future career as a practicing medical doctor.

12. I think that it is necessary for me to learn to communicate in *isiZulu*.

1	2	3	4	5
---	---	---	---	---

13. The *isiZulu* course for medical students in Year 1 was very useful to introduce me to the language.

1	2	3	4	5
---	---	---	---	---

14. The simulated patient sessions/ orals in Year 1 were very useful to allow me to practice

my skills in a medical context.

1	2	3	4	5
---	---	---	---	---

**15. The clinical material, vocabulary and phrases supplied on Moodle were very useful to expand my knowledge and practice of clinical *isiZulu* .**

1	2	3	4	5
---	---	---	---	---

**16. The inclusion of the *isiZulu* OSCE stations in Years 2 and 3 was very useful to encourage me to become orally competent in the language.**

1	2	3	4	5
---	---	---	---	---

**17. I have used the *isiZulu* that I have learnt to engage with a patient in the Clinical Methods course to gather information (take a history).**

1	2	3	4	5
---	---	---	---	---

**18. I have used the *isiZulu* that I have learnt to engage with a patient in the Clinical Methods course to give instructions or make recommendations.**

1	2	3	4	5
---	---	---	---	---

**19. I have used the *isiZulu* I have learnt to engage with a staff member during the Clinical Methods course.**

1	2	3	4	5
---	---	---	---	---

**20. I feel that my encounters with *isiZulu* patients are more meaningful when I am able to engage with them in their mother tongue (enhanced student-patient communication).**

1	2	3	4	5
---	---	---	---	---

**21. I feel that my encounters with *isiZulu* staff members are more meaningful when I am able to engage with them in their mother tongue (enhanced student-staff communication).**

1	2	3	4	5
---	---	---	---	---

**22. I feel that the ability to communicate with my patients in *isiZulu* in my future career will improve health outcomes for my patients.**

1	2	3	4	5
---	---	---	---	---

**23. I feel that my ability to communicate with my patients in *isiZulu* in my future career will improve public health outcomes for the community where I work.**

1	2	3	4	5
---	---	---	---	---

**24. I would like to work in a rural South African community when I qualify as a doctor.**

1	2	3	4	5
---	---	---	---	---

**25. I will definitely continue to maintain/ improve on my *isiZulu* communication skills if support is offered (additional *isiZulu* sessions) in the clinical years.**

1	2	3	4	5
---	---	---	---	---

**26. I will definitely continue to maintain/ improve on my *isiZulu* communication skills even if unsupported.**

1	2	3	4	5
---	---	---	---	---

**27. Please add a comment on how you experienced learning in *isiZulu* on the MBChB course.**

.....  
.....  
.....  
.....  
.....

**28. I think that the students' learning in *isiZulu* can be improved by:**

- a. ....
- b. ....
- c. ....
- d. ....

**isiZulu Written Test**

**Total: 60 marks (2 marks per statement)**

**UMBUZO 1**

**Humusha ngesiZulu – Translate into Zulu (Use the space provided.)**

1. I have a tummy ache. ....
2. Wash your hands well!.....
3. The doctor is here.....
4. What is wrong with you?.....
5. Where is the nurse?.. ..
6. I will examine you.....
7. We are tired. ....
8. What is your name? .....
9. Please sit down.....
10. Do not smoke!.....
11. Vusi, do not drink beer!.....
12. Where do you work?.....
13. I request milk.....
14. The medicine is expensive.....
15. Mom is a teacher.....

**[30]**

**UMBUZO 2**

**Humusha ngesiNgisi - Translate into English (Use the space provided.)**

1. *Ubaba udakiwe*.....
2. *Umntwana uphethwe yisifuba*.....
3. *NginguMandla*. ....
4. *Phuza umuthi kabili ngelanga* .....

5. *Ngizokujova* .....
6. *UMama uphethwe yini?* .....
7. *Amaphilisi aphelile* .....
8. *Kubalulekile ukuphumula* .....
9. *Abantwana balambile* .....
10. *Wenza msebenzi muni?* .....
11. *Abantu baphethwe yingculazi* .....
12. *Ingane iyakhala* .....
13. *Inyoka iluma uJo* .....
14. *Ngicela ukuya ekhaya* .....
15. *Ngiyakhwehlela* .....

[30]

Checked by researcher: \_\_\_\_\_

Date: \_\_\_\_\_