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Language of Instruction and
Teacher-Pupil Interactions in
Public Schools in Zanzibar
*A Comparative Study of Kiswahili-
speaking and English-speaking 4th and
5th Grade Classrooms*

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Abstract

Research has shown that using Kiswahili as a language of instruction (LoI) leads to much better learning than when teaching in English, but in 2015 the government in Zanzibar implemented a new language policy in education which introduced English as LoI already from 5th grade of public primary schools in the subjects: math, science and information and communication technology (ICT). Evidence from research show there is an interconnectedness between LoI, teacher-pupil verbal interactions and pupils' ability to learn. Being able to understand the LoI is important to ensure appropriate teacher-pupil interactions. The aim of the thesis is to identify the possible effect the introduction of English as LoI has on teacher-pupil verbal interactions. To accomplish this goal the study embarks on a comparative study exploring how teacher-pupil interactions might differ when using Kiswahili as LoI in science in the 4th grade as opposed to using English as LoI in science in the 5th grade at primary schools.

A micro-ethnographic research design was used to conduct the interview with the teacher and to conduct observations of the lessons. Tsui's Seventeen Category System (SCS) was used when analyzing the observations of the lessons since it explains the teacher-pupil verbal interactions and explores the combinations of verbal behavior. The study searched for emerging themes of verbal interactions and how they are constructed. The findings displayed that the two grades had the same proportion of teacher and pupil talk, but in the significant difference was that in the 5th grade Kiswahili was spoken 50% of the time. It was revealed that pupils struggled with understanding and speaking English, which lead to the extensive use of code-switching (switching between the languages). This strategy was used to make sure pupils would at least understand core ideas and be prepared for the introduction of English as LoI. The research concludes that the language policy that introduced English as LoI affects teacher-pupil verbal interactions. A large proportion of teacher-pupil verbal interactions are based on teaching and learning English rather than teaching and learning the content of the subject. Further research is needed for strengthening the discussion on how the introduction of English as LoI in primary schools in Zanzibar affects learning.

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List of Abbreviation

FIAC	Flanders' Interaction Analysis Categories
LOITASA	Language of Instruction in Tanzania and South Africa
MoEVT	Ministry of Education and Vocational Training
SAR	The Special Administrative Region
SCS	Seventeen-Category System
SUZA	State University of Zanzibar
TANU	Tanganyika African National Union
TRANSLED	Transformation, Language, Education and Development
UNESCO	United Nations Educational, Scientific and Cultural Organization
URT	The United Republic of Tanzania

1 Introduction

According to Brock-Utne (2014), the language of instruction (LoI), is the most important and least appreciated issue of education in Africa. The continent is linguistically diverse with more than 2000 languages (Wolff, 2000). However, the languages of the former colonial nations dominate sub-Saharan African classrooms. No secondary schools or universities use an African language as LoI, except some universities in South Africa, which use Afrikaans (Brock-Utne, 2010, 2014). Brock-Utne argues that the actual minority languages of Africa are English, French and Portuguese, while major languages, spoken by millions of people, are Kiswahili, Hausa, Yoruba, Amharic and Fula, to mention but a few. Kiswahili alone is spoken by over 100 million people (Brock-Utne, 2014).

In the United Republic of Tanzania (hereafter Tanzania) about 90 percent of the population speaks Kiswahili. In addition to Kiswahili, most people grow up with at least one of Tanzania's 128 registered vernacular languages as their mother tongue (Petzell, 2012). In Zanzibar it is somewhat different when it comes to vernacular languages. In that case, the vast majority has Kiswahili as their mother tongue. Both Kiswahili and English are registered as the official languages in Tanzania. Throughout Tanzania, Kiswahili is predominately used in television and radio broadcasting, newspapers (Media Council of Tanzania, 2019) and in parliamentary debates (Nyankomo, 2014). Public primary schools in Zanzibar use Kiswahili as the LoI, but from the 5th grade at the primary school, through secondary level and in tertiary level of education, English is used as the LoI (MoEVT, 2017). Other than being used as a LoI, English is used in High Court matters and international relations such as foreign trade and diplomacy (Petzell, 2012). Petzell argues that in Tanzania, English is “perceived as a magical key to social prestige and power” (2012, p. 141). However, one should question the relevance of using English rather than Kiswahili as the LoI in Tanzania since Kiswahili is the most dominant language in the public sector.

One should also question the quality of the learning that can be provided in schools when pupils must use a language that is not familiar to them. Brock-Utne notes that:

“The language of instruction is the vehicle through which knowledge is transmitted” (Brock-Utne, 2014, p. 10). Without the right fuel, in this case the relevant language, the vehicle breaks down and stops, and there is little to no transmission and learning. Pupils need to understand what is being taught in order to learn and teachers need to teach in a language in which they are proficient in order to ensure appropriate teacher-pupil interactions, especially verbal interactions (Amidon & Hough, 1967).

According to Amidon and Hough (1967) “70% of classroom instructional time is spent in talk by either the teacher or students” (p. 118). During this time, teachers and pupils communicate by presenting information and ideas, asking questions and responding to them, and clarifying ideas. Therefore, LoI is vital to classroom interaction and the process of learning. Classroom interaction needs LoI for education to reach the pupils as much as pipelines are needed for water to reach its destination (Qorro, 2009). Therefore, researching LoI in relation to teacher-pupil interaction is significant, especially in Tanzania, where the LoI changes as the students advance in the education system.

Research shows that using Kiswahili as a LoI in secondary schools in Tanzania leads to much better learning than when teaching in English (Mwingsheikhe, 2007; Vuzo, 2007; Brock-Utne, 2007, 2008; Qorro 2009; Babaci-Wilhite, 2010). However, in 2006, the government in the semi-autonomous region of Zanzibar in Tanzania developed an education policy reform that introduced English as LoI already from 5th grade of public primary schools in math, science and information and communication technology (ICT) in order to improve the education system (MoEVT, 2006).

The structural reforms from the new education policy was planned to be gradually implemented and fully operational from 2010 to 2015, starting with the 1st grade in 2010 followed by stepwise implementation in each class until in 2015. By 2015 the 5th grade would be the first one to be exposed to the changes in LoI in math and science, thereafter, the 6th grade will follow (Babaci-Wilhite, 2013).

The purpose of the thesis is to explore how teacher-pupil interactions might differ in classrooms with Kiswahili as LoI compared to classrooms with English as LoI. The research aims at identifying the possible effect of the change of LoI on teacher-pupil

verbal interactions. The research also aims at contributing to an increased pool of research on LoI in education, especially how LoI plays a role in the interactions between the teacher and the pupil in primary schools in an African context. It also serves to inform policymakers in Zanzibar about possible implications of the new LoI policy on classroom interactions and therefore the quality of education, which is essential to improve the education system.

1.1 Research Questions

In order to conduct the study, the following specific questions have been formulated:

1. How do teachers and pupils verbally interact in Kiswahili-speaking and English-speaking classrooms, respectively?
 - a. What language input is provided by the teacher and how does it affect the immediate output of the pupils, and vice versa?
 - b. What are the verbal interaction patterns?
2. How do teachers experience teacher-pupil verbal interactions using Kiswahili and English as LoI?

The purpose of the first question is to explore how the ground realities of introducing English as LoI in comparison to Kiswahili in primary school affects the teacher-pupil interactions, and thereby the opportunities of teaching and transferring knowledge. In order to accomplish this one needs to map the teachers and pupils' language inputs and outputs. This should be followed by an investigation of how these verbal behaviors interact with one another, establishing the verbal interaction patterns made from teacher-pupil verbal interactions. Both sub-questions are inspired by Tsui's research on teacher-pupil verbal interactions, which is further discussed in the analytical framework (1985).

The second question adds another perspective on how introducing English as LoI rather than Kiswahili affects teacher-pupil interaction. It aims at exploring how teachers

perceive the language of instruction and the effects of using English compared to Kiswahili when interacting with the pupils.

1.2 Scope and Limitation of the Study

1.2.1 Scope of the study

The field work for the research took place on Zanzibar Island from November 7th to December 5th, 2015. The topic for the research is teacher-pupil verbal interactions in the classroom, studying the ground realities of verbal interactions in Kiswahili-speaking classrooms compared to English-speaking classrooms. It is a small-scale study which includes classroom observations of two classrooms, one in the 4th grade and one in the 5th grade at a primary school, as well as an interview with the teacher that taught during both the observations.

1.2.2 Limitations of the study

The most important limitations of the study concerned the field work for when original data were collected. Of particular concern, limitations in translation process, the relevance of the research tool, and the fact that the data are now somewhat dated.

In regard to the translation, losing words or meaning in the translation process can lead to an incomplete or even erroneous representation of the data. Since Kiswahili is not my mother tongue or my language of profession much effort was done to ensure quality translation from Kiswahili to English particularly for the interviews with teachers. The translator that assisted in the interviews was a former student president of the State University of Zanzibar (SUZA). While being proficient in English, he had never been a translator for research work before this study. Therefore, detailed instructions were given before the interviews concerning his role as a mediator between the interviewee and myself, mainly to leave out any possible personal interpretations of what was said. However, even with my basic Kiswahili skills, it was obvious that the translator did not always comply with this since the long replies from the teachers were often only summarized. Therefore, another translator was hired to transcribe and translate the

audio-recordings from the interviews, which were then used to compare with the information given by the translator.

Finding an appropriate translator to transcribe and translate the audio-recordings in the classrooms was difficult. Since many failed to comply to the directions I gave them or just gave up because of the tedious work that this demanded, I finally hired Can Translators, a registered language service agency (Appendix 12), to do a professional translation of all my classroom audio-recordings according to my criteria. However, some words or meaning are still expected to have been lost in translation from both interviews and classrooms recordings due to the nature of translations.

Another important limitation to highlight is the analytical tool that was used to collect and analyze the data. This tool was created for the purpose of analyzing the case of Hong Kong (Tsui, 1985), rather than an African or specifically Tanzanian context. Although one can question the degree to which the analytical tool fits the context in Tanzanian classrooms, I found no other more relevant comprehensive tools for analyzing classroom verbal interactions. Furthermore, I added elements as needed to the tool that were particularly relevant to my research in Zanzibar.

The original data were collected in 2015 which may be considered somewhat outdated. However, since there is little research on the topic of teacher-pupil verbal interactions in Zanzibar or in general or on the early effect of the change of the language policy in Tanzania, and that it has not been possible to collect more recent data, the results still serve to increase the knowledge in this specific area both in general and specifically in Zanzibar.

1.3 Structure of the thesis

The thesis has eight chapters. The first chapter presents the introduction which describes the background of the problem, the problem statement and the purpose statement. The chapter presents the objectives of the research and the research questions that guide the research. The scope and limitations of the study are presented as well and, in the end, an overview of the thesis' structure.

Chapter two presents an introduction of general background information about Zanzibar followed by a description of current education in Zanzibar. The next section presents the historical background of language policy in education in Zanzibar. The chapter ends with a concluding section.

Chapter three consists of a literature review of the related studies outside of Tanzania and related studies on Tanzania. It presents related study outside of Tanzania and three related studies on Tanzania.

Chapter four presents the analytical framework, which consists of key concepts such as language, language of instruction and teacher-pupil verbal interactions. The chapter also presents an analytical tool called the Seventeen-Category System, which is used to assist in analyzing the data. The chapter ends with a concluding section.

Chapter five discusses the choice of research design and methodology and how they are to be implemented. The research approach is defined and the design is presented. The chapter discusses how data collection methods are planned to be implemented and includes the collection strategies: observations, interviews, audio-recording and field notes and diary. The research site is defined followed by a description of sample and sample selection techniques. This section presents the how schools, classroom observation, teachers are selected and how the sample was accessed. The chapter includes a section explaining elements of the research process, such as the use of translators and transcribing methods. The data analysis procedure is presented in this chapter and gives an overview of the steps that are used to analyze the data collection. The selection of data for analysis is also explained here. The next section discusses the quality of the research divided into two parts, validity and reliability. The last section of the chapter concerns with the research's ethical considerations.

Chapter six presents the data and the analysis. First it describes the selected school and teacher and then gives an overall perspective on classroom talk from the observed classrooms. The proportion of classroom talk in both observed lessons are presented followed by three main themes that emerged from the analysis. These are: code-switching and code-mixing, repetition routines and coordinated chorus. The next section

presents extracts from the teacher's interview and presents findings and analysis of the interview. Four themes emerged and they are: the importance of using LoI when interacting with the pupils, challenges experienced, coping with the challenges and suggestions how to solve the challenges.

Chapter seven discusses the interpretation of the data divided into the following themes: repetition routine, coordinated pupil's chorus and how switching LoI affects teacher-pupil verbal interactions. The discussion ends with a conclusion.

Chapter eight concerns the conclusion of the thesis, which sums up the important issues raised in the thesis. Finally, it presents recommendations for teachers, the government and for further research.

2 Historical overview of education policies in Zanzibar

This chapter provides a general overview of Zanzibar and its semi-autonomous government. It also gives a general background of the current education system and the development of education and language policy and its relation to each other over time.

2.1 General overview of Zanzibar

Zanzibar is a semi-autonomous region of Tanzania and consists of two main islands, Unguja and Pemba and several small islands around them (Figure 2.1). The islands are located 20-50 kilometers off the coast of Tanzania. According to the last population and housing census in Zanzibar undertaken in 2012, the population of Zanzibar was 1,303,569 people of whom about 42% are younger than 15 years old (URT, 2014). Virtually all (99%) are Muslims (BDHRL, 2016). Almost 700,000 people live in the urban areas and about 600,000 in the rural areas. Approximately 30% of the economic activity relates to farming, meaning that Zanzibar depends heavily on agriculture (National Bureau of Statistics, 2014).

Zanzibar gained its independence in 1963 and in the same year joined Tanganyika (mainland in Tanzania) in forming the union the United Republic of Tanzania (Wright, 2016). Zanzibar has its own separate government called the Revolutionary Government of Zanzibar (RGZ) (MoEVT, 2014). The RGZ does not have authority to deal with union matters such as higher education, defense, internal security issues, and monetary affairs (MoEVT, 2014). However, RGZ has executive, legislative and judicial power to conduct internal affairs and to decide on developmental issues concerning e.g. basic education. The RGZ has the responsibility to provide and fund basic education in Zanzibar.

2.2 Education in Zanzibar

The current education structure for formal education in Zanzibar follows the 2-6-4-2-3+ structure, in which the first two years are compulsory pre-primary education with the entry age at four years old (MoEVT, 2006). The entry age for primary education is six years old and the pupils advance from Standard 1 to Standard 6, completing six years of primary education (MoEVT, 2017). Ordinary secondary education consists of four years from Form 1 to Form 4. The entry age is 12 years old. Higher secondary education consists of two years from Form 5 to Form 6. Here the entry age is 16 years old.

University level education is three years or more and the entry age is 18 years old. The 12 years of education from pre-primary to secondary is compulsory (MoEVT, 2017). Kiswahili is the LoI from the 1st grade to the 4th grade of public primary school. From the 5th grade to 6th grade the LoI is English in the subjects: science, math, and ICT (MoEVT, 2017). Zanzibari teachers that teaches in primary school the subjects that are using English as LoI have difficulties using English (MoEVT, 2017). English is used as the LoI in ordinary and higher secondary and also in higher education (MoEVT, 2017).

2.2.1 A brief history of education and of the language policy in education

Before gaining independence, Zanzibar's language policies and education were, in general, influenced by the former colonial powers. From as early as the sixteenth century and thereafter, for several centuries, Zanzibar was controlled by the Portuguese, the Ottoman Arabs and the British (Wright, 2016).

The Arabs that settled in Zanzibar established Islamic education to study the Arabic language and the Quran for economic gain (MoEVT, 2010). A British protectorate was established for Zanzibar in 1890 and ruled through a sultan (Wright, 2016). Western education was slowly introduced after the British gained power. However, it was the Indian community in Zanzibar that built the first school, named Sir Euan Smith Madressa, to serve the education of their own children (MoEVT, 2010).

The educational system during British rule was discriminatory because it was at first open only for the elite Arabs and for people of Asian descent (MoEVT, 2010). They received 12 years of primary and secondary education. In contrast, people of African descent received only four years of education. However, in 1935 it was extended to 8th grade, but classes were still dominated by Arabs. Colonial education at Zanzibar promoted the use of English and Arabic, but also of Kiswahili (Decker, 2010).

Over the centuries the Kiswahili language was spread over a vast area from the coast of Tanzania to Central Africa because it was used for connecting people in the region when engaging in commercial trading (Wright, 2016). Since it was a well-established language it was seen as the region's *lingue franca* and even used in state institutions when Zanzibar was colonized. Kiswahili was so widely used that the British decided to use Kiswahili as LoI in primary education for the colonial settlers in order to be able to communicate with the African population (Wright, 2016).

During the 1950s, the independence movement Tanganyika African National Union (TANU) used Kiswahili to organize the movement and to create a national identity under which it was able to unite the people against colonialism (Wright, 2016). Kiswahili was identified as being essential for the establishment of the socialist state and it was made the national language after Tanganyika gained its independence in 1961.

When the RGZ took control of state affairs the discriminatory system of the former colonial rule was eliminated and it was declared that education was to be open and free for all Zanzibari children (MoEVT, 2010). However, decades later English was still used by the elite minority as LoI in secondary schools while Kiswahili was used as LoI in primary schools. This increased the segregation of the society as secondary education required a fee to attend (Wright, 2016). During the 1970s and the 1980s Tanzania struggled economically and became aid dependent, particularly of the International Monetary Fund and the World Bank. The aid organizations preferred English; “widespread English competence had practical advantages for them and, as Mazrui suggests, there was probably an ideological dimension” (Wright, 2016, p. 91). This external support for education led to less focus on using Kiswahili as LoI in education.

The economic situation in the 80s and the 90s improved, but the government cut spending on education. The education system suffered from attendance loss, poor quality curriculum and poorly trained teachers (Wright, 2016)

In 2000 the government of Zanzibar adopted a poverty reduction strategy called Vision 2020 and from the Vision 2020 several poverty strategy plans were put into motion within a decade with the aim of improving the living conditions of the Zanzibari people and providing education that could improve the economic situation with an educated and skilled labor force (MoEVT, 2014). The government of Zanzibar committed to the Education For All (EFA) convention, which stated that the government should facilitate for 12 years of compulsory basic education. In 2006 the government decided on major reforms of the education system, establishing a new education policy (MoEVT, 2014). The implementations of the reform were introduced gradually from 2010 till 2015 (Babaci-Wilhite, 2013). One of the changes reduced the grades in public primary schools from seven grades to six. There were also changes made to the language policy in education, introducing English as LoI already from the 5th grade in primary school in certain subjects (MoEVT, 2015), which were presented earlier in this chapter.

3 Literature review

The literature review focuses on similar studies to this one conducted for countries outside of and on Tanzania. Since the literature review has been limited to studies that apply an approach to the issue of LoI change that is of a similar nature to the one adopted for this research, they are limited in number.

3.1 Related studies outside of Tanzania

Lo and Macaro (2012) conducted research in Hong Kong, where they specifically examined schools that switched LoI from Chinese, the pupils first language, to English, their second language. The Special Administrative Region (SAR) of China enforced a compulsory mother tongue policy which stated that all secondary schools must use Chinese as LoI. According to the policy, schools could apply for changing the LoI, but were not allowed to do so until 10th grade in secondary school. Lo and Macaro were interested in understanding the difference between classes that had experienced the switch and classes that had not. Thus, the study focused on 9th and 10th grade. Their aim was to find out if the switch had any implications on good and effective pedagogical practice, such as classroom verbal interactions, and therefore the learning process.

Lo and Macaro (2012) argue that no comprehensive and objective research had been done on this subject in Hong Kong and applied a mixed methods approach to do so. For example, they measured the “Teacher/student talk ratio” (Lo & Macaro, 2012, p. 33) (quantitative), which is the amount of time the teacher or pupils talk in lectures, and then explored the different variables that were revealed. They also did an in-depth exploration of the patterns of verbal interactions and of the meaning of the teacher's questions (qualitative). In their theoretical framework, they combined two research strands: psycholinguistics and socio-cultural understanding, and framed their study in “terms of language use and academic progress” (Lo & Macaro, 2012, p. 32).

For their classroom observations they used a comprehensive and modified version of Tsui's (1985) Seventeen-Category System. This system categorizes verbal acts and interactions and is used to calculate the ratio of the verbal acts. Lo and Macaro's findings indicated that the use of Chinese as LoI tends to produce more interactive classrooms than classrooms with English as LoI (2012). In English-speaking classrooms, teachers were less able to use pedagogical skills to help students to develop deeper understanding of the concepts that were taught. However, according to Lo and Macaro (2012), the validity of the study was somewhat weak, as the patterns of teacher-pupil interactions were measured in a short period of five weeks. They suggested that other in-depth studies teacher-learner interaction should be conducted because few exists in their field of study.

3.2 Related studies on Tanzania

For the review on Tanzania, three studies were selected.: One is LOITASA (Language of Instruction in Tanzania and South Africa) which is a project that compiles several other studies concerned with how LoI affects teacher-pupil verbal interaction in Tanzania, but not based on in-depth research. In addition, two studies approach the use of English and Kiswahili as LoI and how English affects pupils' ability to understand and learn in the classroom.

3.2.1 The LOITASA project

As part of the LOITASA project, which ran from 2001 until 2011 (University of Oslo, 2015), a number of class-room studies were conducted. These are described in ten books published on the project as well as in 12 doctoral and more than 30 master theses. The interaction between teachers and pupils in secondary school classrooms that use Kiswahili versus classes that use English appear particularly in the doctoral theses of Mwinsheikhe (2007) and Vuzo (2007) and in an article by Brock-Utne (2007). However, little research has been conducted as in-depth observation studies of teacher-learner verbal interactions specifically in Zanzibari primary school classrooms that use Kiswahili versus classes that use English.

3.2.2 Going Through the Motions of Learning: Classroom Interaction in Tanzania

Rubagumya (2008) conducted a baseline study, observing classrooms in Tanzania. The sample consisted of mainland schools, 6th grade at primary school and 1st grade at secondary schools. The findings and discussions of the study were to direct further studies of on what was called: “the Language and Literacy Project” (Rubagumya, 2008, p. 143). The study considers LoI in the classroom as imperative to the quality of education. Rubagumya argues that proficiency in LoI is important for successful teaching and learning. He states that without proficiency in the spoken language in the classroom pupils will have difficulties understanding what is being taught and to read the required textbooks. The aim of the project was to find efficient practices in teaching both English and Kiswahili and to “develop policy options regarding the instruction of bilingual education” (Rubagumya, 2008, p. 144). The focus of the baseline study was to examine classroom interactions. Included was also a description of the school environment, which contextualized the study and revealed other variables that can affect classroom interactions, for example, the lack of libraries and classroom text materials, and the number of pupils per classroom.

Rubagumya's theoretical framework considers literacy not only as the skill of writing and reading in a language, but also as a social practice (2008). This practice is socially constructed through the interaction between people, between students and teachers, and through the way people make sense of the world. This framework framed the Language and Literacy Project, but the connection between the project and the baseline study is not clear. From the observations of classroom interactions, Rubagumya (2008), just like Mwinsheikhe (2007), Vuzo (2007) and Brock-Utne (2007), found that when English was LoI, the class was much more teacher-dominated than when the class was using Kiswahili. This indicates that pupils were unable to follow the lessons in English. Rubagumya (2008) also highlights that both teachers and students were struggling with English when using it as LoI. They coped with this challenge by using code-switching, switching the language from English to Kiswahili, in order to resolve any immediate communicative problems, and then switching back to English

3.2.3 The impact of the language of instruction on teacher-pupils classroom interaction in history subject in primary schools in Tanzania

Magulu (2016) conducted research for her master's thesis assessing the impact of LoI on teacher-pupil classroom interactions in primary schools on 5th and 6th grade in Shinyanga municipality in Tanzania. It is a comparative study of a private school using English as LoI and a public school using Kiswahili as LoI. She approached the assessment using qualitative research methods. She conducted a case study where she observed teacher-pupil interactions in 12 classrooms divided equally between 5th grade and 6th grade, with history as the subject. In order to include other perspectives, she interviewed different stakeholders (six pupils, teachers and headmasters) from the schools and also organized focus groups with pupils.

Magulu (2016) concluded that using English as LoI has a negative impact on pupils and teachers. They find it difficult to communicate with each other due to lack of language proficiency which in turn leads to much switching between Kiswahili and English or mixing them in the English-speaking classrooms. The assessment shows that pupils and teachers feel uncomfortable speaking English and pupils are frustrated when trying to learn the content of the subject. Pupil participation is very low when English is used as LoI.

In comparison, in the Kiswahili-speaking classrooms pupils were much more engaged which facilitated effective participation and learning (Magulu, 2016). Teachers also benefited from using Kiswahili as it assisted their professional performance. According to the study, pupils still were pro-English hoping it would help them in other settings than at the school. They thus preferred English as their LoI. However, as Magulu points out, these pupils were not aware of the difference between using a language for instruction and learning a language.

3.3 Conclusion

Evidence from the research presented reveals that there is an interconnectedness between LoI, teacher-pupil interactions and pupils' ability to learn. The studies suggest that the LoI affects the teacher-pupil interactions and understanding of what is being taught when using English as the LoI is the key factor. Recent research has focused on how teacher-pupil interaction is affected by the use of English as LoI in Tanzania in the primary school, However, no study has yet been conducted on Zanzibar which is the purpose of this thesis. A structured system for analyzing what is happening in the classroom, such as the one used in the study of classroom verbal interactions in Hong Kong, is applied in the thesis and forms part of the analytical framework presented next.

4 Analytical framework

The presentation of the analytical framework includes a discussion of the essential concepts for the study, namely language, language of instruction, and verbal interactions. In addition, the seventeen categories adopted from Tsui (1985) as an analytical tool for the study are introduced.

4.1 Language

In her comprehensive book on languages of the world, Pereltsvaig defines language as “a system of communication based upon words and the combination of words into sentences” (2012, p. 2). She states that language is exclusively a human attribute that can facilitate the exchanges of thoughts, feelings, threats, wishes, opinions, and so on. Pereltsvaig also mentions the silent form of communication such as using the body to express feelings or lifting the eyebrows to signify the feeling of being surprised.

In this thesis, a distinction is made between verbal and nonverbal communication. Based on Pereltsvaig’s definition of language, the ‘verbal’ is the utterance the thoughts, feelings etc. Nonverbal communication is expressed silently with the body, for example when the teacher directs the pupil to sit down and the pupil responds by sitting down

4.2 Language of instruction

Qorro (2009) asserts that the LoI is the medium used to deliver education to the students. The United Nations Educational, Scientific and Cultural Organization (UNESCO) defines LoI as: “the language used for teaching the basic curriculum of the educational system” (2003, p. 14). The choice of LoI often depends on the official, national, local or majority language, which is stated in a country's or a region's educational policy (UNESCO, 2003).

Two relevant and different changes of the language choice have been noted by Brock-Utne and Holmarsdottir (2003), namely called code-switching and code-mixing, where

the term 'code' refers to the chosen language. Code-switching takes place between the sentences, while code-mixing occurs within sentences. Brock-Utne and Holmarsdottir explain that code-switching is a strategy that teachers in Tanzania sometimes use in an English-speaking classroom when they explain an idea in Kiswahili, because the pupils are unable to understand it in English. Code-mixing is often used when the user lacks the “language competence in either language concerned” (Brock-Utne & Holmarsdottir, 2003, p. 88).

4.3 Teacher-pupil verbal interaction

Teacher-pupil interaction can be defined as the relationship between the teacher and the pupil in a classroom setting (Cogan, 1967). The direction of this relationship is mainly decided by the behavior of both. Each behavior executed by one (e.g. the teacher) can be, but not always, followed by a change of behavior in the other (e.g. the pupil) and this creates the interaction between them. In order to examine how LoI affects teacher-pupil interaction one must first understand how the two concepts interrelate. As already mentioned, Amidon and Hough (1967) claim that 70 % of the instructional time in the classroom is spent talking. Classroom talk is a verbal interaction and establishes the interaction between the teacher and the pupil. When the teacher talks, he or she may use different techniques of interaction. The teacher can present information, ask questions or respond to questions, criticize or praise the pupil, and help the pupil understand certain ideas. When the pupil talks, he or she might choose to respond to the teacher's question or ask questions. According to Brock-Utne (2014) and Qorro (2009), this classroom verbal interaction should be carried out in a language in which both the teacher and the pupil are proficient. If not, learning is likely to be reduced.

4.4 Analytical lens: Tsui's Seventeen-Category System

The analytical lens of this thesis is based on Tsui's analytical tool, the Seventeen-Category System (SCS) (1985). This analytical tool is used when analyzing teacher-pupils verbal interaction in Kiswahili-speaking and English-speaking classrooms,

respectively. Tsui explains that in SCS “a lesson is perceived as consisting of a series of ‘exchanges’ between the teacher and the pupils. Each exchange in turn consists of a series of ‘acts’.” (1985, p. 12). SCS is a structured observation guide for classrooms and identifies language inputs and outputs, which are classified into 17 categories of acts according to their functions in classroom interactions. An example of language input is ‘questions’ asked by the teacher and language output are ‘responses’ by the pupils. The categories of acts found in SCS are the units of analysis.

Tsui aimed at constructing the SCS as an objective descriptive tool that is less prone to different interpretations of the data generated from the observations of classroom verbal interactions (1985). This can be useful for the thesis when comparing classrooms using English as LoI with classrooms using Kiswahili. It would be difficult to compare the interactions if each lesson is approached with different interpretations of the observed interactions. Shared specifications, such as the categories of acts in the SCS, can establish a common ground for comparison.

When developing the SCS Tsui (1985) draws upon features from three observational systems: Flanders' Interaction Analysis Categories (FIAC) (Flanders, 1970), a descriptive system of 22 categories of acts (Sinclair & Coulthard, 1975) and a less comprehensive observational system which classifies teachers' questions (Barnes, Britton & Rosen, 1971).

FIAC is concerned with the verbal behavior of teachers and pupils in the classroom, assuming that the system can capture a general picture of classroom verbal interactions. Collecting this type of information can inform teachers of how to improve their approach in teaching (Amidon & Hough, 1967).

Tsui (1985) explains that FIAC divides the general picture of the interactions in the classroom into teacher and student talk, which is again divided into two main sections 'initiate' and 'respond'. Both the teacher and the student can initiate the talk or respond to one another. She further explains that within the two main sections Flanders added relevant categories of initiation and response. According to Tsui (1985), some weaknesses have been found in FIAC. Tsui explains that FIAC shows inconsistency, as

some of the categories “are closely related to linguistic data (such as asking questions, giving directions), others are pedagogical acts (such as teacher lectures, praises)” (Tsui, 1985, p. 10). In addition, Tsui notes that in FIAC there are no “objective criteria for identifying the categories” (Tsui, 1985, p. 10) and little understanding of how classroom utterance functions.

Tsui (1985) argues that Sinclair and Coulthard’s observation system countered these weaknesses by reducing the subjective nature of the FIAC categories and by having an underpinning theory. Tsui explains that Sinclair and Coulthard proposed a system of 22 categories that considered every utterance in the classroom which was underpinned by a classroom discourse with the aim of creating “a model of discourse grammar” (Tsui, 1985, p. 10). Tsui further explains why she chose to base most of the SCS on Sinclair’s and Coulthard’s system as follows: “Their categorization of utterances according to the function they perform in the discourse and their place in the structure of the discourse is theoretically motivated. Their identification of the categories according to linguistic criteria enables a more objective analysis of the data” (Tsui, 1985, p. 10).

Only parts of the observational system of Barnes et al. (1971) was used by Tsui. She points out that their system did not cover the overall picture of classroom interactions. However, Tsui adopted Barnes et al.’s classification of teachers’ questions when investigating the language input (Tsui, 1985).

Using a system of categories based on preconceived ideas of the different verbal behaviors can prevent the observation of other spontaneous behaviors in the classroom (Furlong & Edwards, 1977). Therefore, the research approaches the classroom both with Tsui’s system of preconceived ideas of how teachers and pupils verbally interact and a more open position without preconceived ideas. This can be achieved by considering emerging teacher-pupil interactions that are not discussed in Tsui’s SCS.

The SCS was developed in order to enable the analysis of the following aspects which are also of interest to answer the first research question for this study:

1. The verbal interaction pattern.

2. The language input provided by the teacher and how it affects the immediate output of the pupils.
3. Modified input and interaction, and how effective they are as a means of providing comprehensive input and enhancing interaction. (Tsui, 1985, p. 10)

Tsui argues that interaction and language input are strongly related and cannot be explored as two separate phenomena (1985). She explains that verbal interaction patterns can appear as “the balance between ‘Teacher Talk’ and ‘Pupil Talk’ and the balance between ‘Initiate’ and ‘Respond’” (Tsui, 1985, p. 16). This thesis examines these patterns as they appear in the classrooms. According to Tsui, one way to do this is by examining the proportion of the different categories used from SCS and measure categories from ‘initiate’ up against ‘respond’ for both teacher and pupils talk, respectively. One can also measure ‘teacher-initiate’ up against ‘pupil-respond’. For example, in some classrooms 60% of the teacher talk is ‘teacher-initiate’ and zero ‘pupil-initiate’. Verbal interaction patterns can show instances when the teacher uses different categories of acts when initiating the interaction in order to generate a response from the pupil.

Modified input is what Tsui describes as a method the teacher use when pupils fail to respond. If lack of understanding the question is the case, the teacher can modify the original question and make it more comprehensible for the pupil to generate a response.

The outline of Tsui's SCS is attached in Appendix 1, and a comprehensive description of each of the 17 categories in Appendix 2. The latter is used in this thesis as a tool for coding the observed classroom talk by their categories of acts according to their functions in classroom verbal interactions. The research explores the combinations of acts, because they construct the interactions in the classroom, as explained earlier about verbal interaction patterns. It searches for emerging themes of interactions and investigates them to find out how they are constructed. In order to have a deeper understanding of the interaction patterns the thesis explores emerging themes within the acts. This means that it will strive to find meaning to why the different acts are used, and if possible, how they function, especially in regard to language input and output.

In addition, non-verbal behaviors, such as writing on the blackboard, using posters for learning, and activities like reading books, which are closely connected to verbal interactions and relevant to the use of LoI, are considered in the analysis to provide context. For example, when a teacher uses the blackboard to write an assignment the teacher verbally interacts with the pupil when explaining the assignment. Also, one of SCS's categories focuses the teacher directing pupils to do non-verbal actions (Tsui, 1985).

The aforementioned approaches can, when combined for data analysis, assist in establishing a better understanding of the overall picture of teacher-pupil verbal interactions.

4.5 Conclusion

The key concepts of this research are interconnected. Languages are important for the exchange of thoughts, opinions, feelings, wishes and so on. Therefore, language is used as a medium to deliver education to students and teach basic curriculum presented by the educational system. The choice of LoI is based on the region's official language that is stated in its educational policy. However, when pupils struggle to understand English in the English-speaking classrooms in Tanzania the teachers adapt code-switching into their lessons to cope with the challenge. Learning is likely to be reduced when the teacher and the pupils are not proficient in LoI as most instructional time is used teacher and pupils interacting through classroom talk. Teacher-pupil verbal interactions is used share information, ask questions and receiving responses.

Therefore, using SCS as an analytical tool can guide what verbal interactions to observe and analyze how the interactions acts out in both the Kiswahili-speaking and the English-speaking classrooms. The SCS explains the teacher-pupil interactions with preconceived 17 categories of verbal acts. It can enable the analysis of verbal interaction patterns, the language input from the teacher and how it affects the pupil's output. It can analyze when teachers modify the language input and the interactions in order to enhance the interactions. The verbal interaction patterns can be explained by the proportions of teacher and pupil talk in the classroom. The research uses the SCS to

explore the combinations of verbal acts and search for emerging themes of verbal interactions and how they are constructed. In this way one can try to find meaning of how teacher-pupil verbal interactions act out in the classroom.

5 Research design and methodology

This chapter discusses the choices of the research design and the methodology and how they are planned to be implemented for conducting the research. The research approach presents the use of the qualitative research approach. The research design consists of a micro-ethnographic design which guides what methods of data collections are used, which are: observations, interviews, audio-recording, field notes and diary. The chapter defines the research site, the sample and sample selection techniques. The sample consists of the selection of schools, classroom observations, teachers and explains how they were accessed through the Transformation, Language, Education and Development (TRANSLED) project. The chapter includes a section explaining elements of the research process, such as the use of translators and transcribing methods. The data analysis procedure is presented in this chapter and gives an overview of the steps that are used to analyze the data collection. The selection of data for analysis is also explained here. The next section discusses the quality of the research divided into two parts, validity and reliability. The last section of the chapter deals with ethical considerations of the research.

5.1 Research approach

There are two distinctive approaches for conducting research, the quantitative and the qualitative. The quantitative approach views the world objectively and as quantifiable, using statistics to test previously formulated ideas (Bryman, 2012). The qualitative approach looks at the world from a subjective perspective with the aim of interpreting the ways people make sense of the world, their social setting and how the social world is constructed, resulting in generating theory and concepts. While the quantitative stance is mostly known to be devoted to the use of numerical data for analysis, the qualitative approach is concerned with making sense of words and images (Bryman, 2012). This thesis focuses mainly on classroom talk which consists of words and analyzing how

they are used when constructing interactions between people. Bryman (2012) argues that the quantitative and qualitative is not always as distinctive as sometimes supposed. For example, in the qualitative approach one could choose to employ quantifications in order to get a grasp of the extent to which a behavior is prevalent. This approach can be useful when considering the scope of the occurring verbal acts and interactions.

With the qualitative stance in mind, the focus in this study is also on trying to present data in words on how participants experience and understand their social setting such as the classroom verbal interactions and using two different languages. It involves teachers and their experience which can give context to what is happening in the classroom. According to Tsui (1985), one needs to embark on an in-depth study of the verbal interactions in the classroom in order to explore the verbal interaction patterns of teachers and pupils and how LoI affects teacher-pupil verbal interactions. Immersing oneself in a social setting, such as a classroom, characterizes the qualitative research approach (Bryman, 2012). In this way the qualitative approach leads the way for an in-depth exploration of verbal behavior and the teacher-pupil interactions in both Kiswahili-speaking and English-speaking classrooms. The qualitative approach also focuses on deep and rich data that represents emerging themes (Bryman, 2012).

5.2 Research design

The research approach is foremost the broad orientation to the research. The research design establishes a framework for the research which guides the method of data collection and analysis (Bryman, 2012). An ethnographic research design is preferable for this study. It means spending a great amount of time within the social setting of the research site observing the behaviors of the members in that society (Bryman, 2012). However, since the time for field work in this study was limited to about four weeks the research adopted a micro-ethnographic design which is preferable for studies limited to a short period of a couple of weeks or months (Bryman, 2012).

The micro-ethnographic approach leads to a focus on specific dimensions of the general topic (Bryman, 2012). In this case the general topic of the research could consider several aspects of what is happening in English- and Kiswahili-speaking classrooms,

e.g. power relations. However, the thesis focuses on the specific dimension ‘teacher-pupil verbal interactions’. Therefore, the design is basically an ethnographic research design but on a much smaller scale, and thus considers the elements of the general ethnographic design as presented by Bryman (2012).

The micro-ethnographic approach encourages the researcher to be immersed in a social setting, e.g. teacher-pupil verbal interactions in classrooms (Bryman 2012). Such an engagement generates deep and rich data which in turn is analyzed, in order to find emerging themes. Ethnographic research design promotes the use of multiple methods for collecting data for analysis, such as interviews, observations and extensive use of field notes, which are all used in this study (Bryman, 2012)

5.3 Data collection methods

5.3.1 Observations

According to Bryman, when collecting data using the ethnographic method the researcher should define his or her role of observant when immersing oneself in a particular social setting (2012). Bryman explains that this is accomplished when considering the level of engagement: becoming a full-fledged member of the social setting participating in core activities and often interacting with its other members; or being a non-member who does not participate in core activities and have little to no interaction with its members. Bryman mentions that there are different levels and corresponding definitions of engagement between these polar opposites. The latter is called non-participating observer, which is the role and approach adopted in this research for observations. According to Bryman, the former role heavily influences the data, but would also generate data with deeper understanding of the members and their social setting because the researcher develops a closer connection with the society and its members. However, for this study data are collected that is not influenced by the researcher in order to get a purer representation of the field of research, the teacher-pupil verbal interactions. This approach to observing classrooms was chosen since it is nearly impossible to become a full-fledged member of the social setting during one or

two visits and obviously difficult to participate in the core activities in the classroom when being neither a teacher nor a pupil.

The observations were audio-recorded for the purpose of detailed coding of the data after the classroom visits. In addition to transcribing the recordings, the main task was to observe the teacher-pupil verbal interactions by using Tsui's Seventeen-Category System (SCS). The system helped to code the data and is closely related to what Bryman (2012) calls a structured observation method which "is a technique in which the researcher employs explicitly formulated rules for the observation and recording of behaviour" (p. 270).

As done in 'structured observation' a list was made of rules of what non-verbal acts to observe. Notes were taken of observations that could not be captured on the audio-recording, such as non-verbal acts. The following kinds of observations were noted in a notebook: text on the blackboard; drawings made on the blackboard; number of pupils attending the lesson; number of pupils raising their hands; use of books and posters as teaching tools; and other relevant observations that might give context to the observed classroom talk.

Bryman (2012) advocates for the use of structured observation with other methods of collecting data in order to not only observe behavior patterns but also explore the reasons for their use. One such method is interviews of participants that are otherwise observed.

5.3.2 Interviews

The research conducted interviews with teachers that were teaching the observed lessons. A semi-structured interview form was used which is a guide with standard questions that would hopefully clarify the research questions while at the same time being more flexible when conducting the interview (Bryman, 2012). The list of standard questions can be asked in any order if necessary. During the observations and during the interviews new emerging and relevant questions can be asked to follow up on answers that need to be clarified or probed for deeper understanding. The interviews were

therefore conducted after the observations. The research strived to keep the same standard questions for each interview, so that the participants' answers could be compared and recurring or unique experiences could be discovered.

The purpose of conducting interviews is to explore how teachers experience teacher-pupil verbal interactions using Kiswahili and English as LoI. By doing so the research strove to add another perspective on how introducing English rather than Kiswahili as LoI affects teacher-pupil interaction, thus generating a detailed contextualization of the interactions and the LoI being used.

To comply with this purpose a set of questions were prepared for the interview. A copy of the interview guide is found at Appendix 3. The purpose of a qualitative interview is to elicit information about the topic which the interviewee deems important, thus capturing the perception of the interviewee is essential (Bryman, 2012).

The following are Bryman's suggestions for making a productive and quality interview which were followed when designing the interview guide. Thus, in this research, using leading questions were avoided and questions were asked that could map the interviewee's background, such as age, gender, years being a teacher, academic background and linguistic background, in order to contextualize the interviewee's answers and his or her behavior during the observed lessons. The interviews were audio-recorded permitting the researcher to capture and transcribe all the words from the interviews. The interviews were arranged so that the teacher and the researcher could be alone in a room. This was done to avoid noise from the school yard which could interfere with the quality of the audio-recording. Being alone with the teacher could prevent other people from disturbing the interview or affecting the answers of the teacher. The last part of the interview guide uses categories from the SCS, for example how teachers perceive some of the teacher-pupil verbal interactions, what LoI is, how LoI affects classroom talk, and what they think about using English as LoI.

5.3.3 Audio-recording

Audio-recording interviews and observations of verbal interaction in classrooms have several advantages. Instead of being distracted by intensive note-taking and focusing on

writing down as much as possible of what is being said in an interview, the researcher can instead concentrate on “following up interesting points made, prompting and probing where necessary, drawing attention to any inconsistencies in the interviewee’s answers” (Bryman, 2012, p. 482) and even observe how the interviewee responds to different questions, including the body language (Bryman, 2012, p. 482). However, Bryman points out that using a recording device may cause people to feel uneasy and self-conscious of what is being said. Therefore, it was important to ask the teachers if they would allow the interview and their lessons to be recorded. At the same time, they were assured that the recordings would be protected, used only by the researcher and a translator and destroyed after they had served their purpose. All the schools and the teachers agreed on the use of the audio-recorder.

Two digital audio recorders were used, one as a backup in case the other failed to record because of human error or battery shortage. Concerned about capturing all the verbal interactions in the classroom, the recorders were tested in large rooms beforehand. It was discovered that one recorder could not capture everything in a large room. Thus, in order to capture as much classroom talk as possible during the lessons one recorder was placed in front of the classroom and one in the back. This proved to be very useful when transcribing because one could switch between listening to the two audio-recordings if utterances were incomprehensible. Although the two audio-recording devices covered most of the classroom there were at times completely incomprehensible utterances because of loud chatter or low voices.

Another reason why it was decided to audio-record the classes was that it requires much training to note every little variation of verbal behavior and interaction, especially categorizing them according to Tsui’s seventeen-category system, in real time in a 30-40-minute lesson. Recording the lessons allowed for notes to be taken of general observations of the classroom, such as what was being written on the blackboard, and non-verbal behaviors in relation to verbal behaviors between pupils and the teacher, and to focus on emerging categories of verbal interactions and questions for interviews.

The last reason for using recorders for classroom observations was being able to translate the Kiswahili-speaking classrooms afterwards. It was assumed that it would be

too difficult to have a translator translating in real time each verbal input and output from Kiswahili to English at the same time as the researcher was trying to figure out who was talking, listening to the translation in the midst of the classroom talk, taking notes and categorizing the verbal interactions. The recordings facilitated a more detailed translation later after being transcribed.

5.3.4 Field notes and field diary

Extensive use of field notes are characteristics of an ethnographic study and is used to record reflections of the observations conducted by the researcher in order to capture details about the locations and how people interact (Bryman, 2012). During the field work some notes were written down and at the end of each day a field diary was recorded in an attempt to recall what happened during the day and recollect reflections of the research in the field. The use of field notes or a field diary is complementary to the observations and the interviews and is not a main source of data. Before visiting the school, it was decided to take notes on what the classroom looked like, how many teachers worked there, how many pupils attended school, if they lacked books, teaching tools and other relevant observations that could give context to the observations made from the pupil-teacher verbal interactions and the interviews

5.4 Research site

The site of the research was decided based on the purpose of the study. The target for the research is primary schools in Zanzibar. More specifically the research was conducted in classroom where one could observe teacher-pupil interaction. The Uguja island, also known as Zanzibar Island, was chosen because it is the home of the capital city Zanzibar City and the most populated island of Zanzibar.

This had two advantages. One factor affecting the choice of the research site was the time limit for the research, especially for collecting data, and the travel costs. The other was that most government buildings, such as the Ministry of Education and Vocational Training, are located in the capital city, making it easier to apply for and obtain research permits. The capital also provides cost efficient means of traveling to the schools,

because the city connects most of the island's busses. In addition, the research depended on support from the chief project coordinator from the Norad-funded project Transformation, Language, Education and Development (TRANSLED) (Norad, 2015). He was living on Zanzibar Island and thus the research became linked to this site.

Since the largest part of the population lives on Zanzibar Island it was assumed that there were more primary schools which again permitted a large sample size.

5.5 Sample and sample selection techniques

Sampling is a method of selecting a portion of the population for the conduct of research (Bryman, 2012). There are two main methods of selecting the sample: purposive; and non-purposive sampling. The non-purposive method aims at having the sample represent the wider population within the field of study and accomplish this through a large and random sample selection. The purpose of qualitative research is, in contrast, not to have as large a sample size as possible, but to grasp the essence and exhaust most thematic variations of the data (Bryman, 2012). This form of sampling allows the researcher to sample participants in a strategic way.

In this research both sites and participants within the sample site are chosen "because of their relevance to the research questions" (Bryman, 2012, p. 418). In order to answer the research questions the following strategy of selecting the samples was realized. The first one was to obtain access to the site and the participants of the research. The next step was to select the sample of participants based on sample criteria that guided the choice of schools, classrooms for observations, and teachers for interviews.

5.5.1 TRANSLED

The ethnographic approach to research emphasizes the importance of obtaining access to the social setting with which one engages (Bryman, 2012). Bryman suggests that it is important to get in contact with someone or an organization that is relevant to the purpose of the research and has access to the research site. TRANSLED was contacted for this study. The project was interested in supporting my thesis as it relates to the purpose of the project (University of Oslo, 2018). In collaboration with the University

of Oslo, the University of Dar es Salaam and the State University of Zanzibar, the TRANSLLED project aimed at researching different issues that can lead to poor quality of education and children dropping out from schools. The project investigated why many children are not learning enough because of factors related to gender, social class and the use of language.

The project aims at supporting master and doctoral students on the conduct of research on the previously mentioned issues (University of Oslo, 2018). The gatekeeper was the chief project coordinator. He helped with applying for research permits for this study and to contact the MoEVT in Zanzibar for a list of primary school in the area which was used when approaching the schools. The chief project coordinator spoke Kiswahili, which was an advantage, since it was then easier to communicate. His social network and his understanding of how the local government system operates when it comes to research in the country were essential for gaining access to schools within the time limit.

5.5.2 The selection of schools

The initial and main sample criterion for the research was that the lessons observed in a Kiswahili-speaking classroom should have the same teacher teach the same subject in an English-speaking classroom. It is assumed that having the same teacher teach in both classrooms might reduce differences between the classrooms when comparing them than would be the case if different teachers were doing it. Only primary schools that matched this criterion were selected.

When arriving in Zanzibar, I was informed that the school year ended on November 27th, leaving me with two weeks to visit the schools. Therefore, plans were made to visit one school each day for one week to conduct observations in the classroom and interviews. The number of five schools were set as sample criterion and chosen for the first week. It was decided to visit the schools and observe the lessons for a second time the following week. The assumption was that the researcher could compare the observations of one classroom to the same classroom the next week in order to choose the observations that generated the richer data for analysis.

Having just a few days to find the schools the gatekeeper from TRANSLED assisted in contacting headmasters or headmistresses from primary schools within an area which did not require more than a day of traveling to reach. The gatekeeper contacted a government official to obtain the list of telephone numbers to both urban and rural primary schools. He then contacted up to about 30 schools until the sample criteria were met. Only rural primary schools met the sample criteria and all the headmasters and headmistresses confirmed that they met the criteria.

5.5.3 The selection of classroom observations

The criteria for selecting which classrooms to observe were based on Zanzibar's implementation of the new education policy that changed the LoI from Kiswahili to English for science, math and ICT starting from 5th grade in 2015, i.e. the year that the observations were conducted.

One of the criteria for the selection is the comparative aspect of the study. The research compares English-speaking classrooms with Kiswahili-speaking classrooms. Thus, subjects taught in both languages, namely science, math and ICT, were considered. However, math and ICT were not included because of time and data constraints. Science was chosen for the observations because it could potentially be a more productive choice based on the assumption that it produces more classroom talk and verbal interactions than math or ICT.

After establishing the subject, the research needed to select which classrooms to observe. For the English-speaking classroom, science classes in the 5th grade was the obvious choice. Since there are no science classes taught in Kiswahili in the 5th grade the closest grade that uses Kiswahili as the LoI for all subjects is the 4th grade. Therefore, the sample selected for the classroom observations were science classes in both 4th grade and 5th grade. In each selected school two classroom observations were made, one in 4th grade and one in 5th grade. This resulted in 10 observations. As mentioned, the selected five schools were visited a second time the following week and 10 new observations were made. Therefore, the field work accumulated data from a total of 20 observations as displayed in Table 5.1.

Table 5.1 Sample of selected classroom observations, by grade

Selected sample	Schools		Total
	4 th grade science (Kiswahili Lol)	5 th grade science (English Lol)	
Week 1			
Observations	5	5	10
Week 2			
Observations	5	5	10
Total			20

5.5.4 The selection of teachers

Selecting a sample of teachers for interviews was important in order to explore teacher experiences. Complying with the sample criterion that the teacher should teach in both LoIs meant that the teachers selected should teach science in both 5th grade and 4th grade. The teachers were preselected based on the aforementioned criteria. Therefore, a total of five teachers, one from each school, was selected and interviewed immediately after they had been teaching.

5.6 Research process

This chapter deals with two actions that were taken in order to facilitate the analysis of the data. The two actions were: the use of translators and transcribing the audio-recordings. Translators transcribed and translated the audio-recordings from Kiswahili to English. During the field work a translator assisted in translating from English to Kiswahili and vice versa.

5.6.1 Translators

Zanzibar is a Kiswahili-speaking area where most people speak only some degree of English. This was particularly apparent in the rural areas. As discussed in Chapter 1, the chief project coordinator of TRANSLED assisted me in finding a translator who was the former student president of the State University of Zanzibar (SUZA). The translator had deep knowledge of Zanzibar and a high level of proficiency in the English language. He

assisted me with contacting the headmasters and headmistresses and arranging the visits to the schools. He also assisted me with the translation during the discussions with the headmasters and headmistresses about the research and when conducting the interviews.

Before being interviewed the teachers were given the option to speak in Kiswahili or English when answering. Often the teachers started answering the questions in English, but their low proficiency resulted in poor replies and they were often encouraged by the researcher to use their mother tongue to express themselves better. The translator was asked to act as a mediator translating for the researcher and the interviewee word by word. It was assumed that some information would be lost in translation. To counter this as much as possible in interviews the audio-recordings were transcribed and translated by another translator.

The translator from SUZA was present in the classroom and sat next to the researcher during the observations in order to explain matters that could affect what was written down as field notes on what was happening whenever the participants spoke Kiswahili.

Other translators were used for transcribing and translating all the audio-recordings that captured the lessons from the Kiswahili-speaking classrooms and whenever the teacher spoke Kiswahili in the English-speaking classrooms. Also, whenever the interviewees spoke Kiswahili in the audio-recordings a translator was needed to transcribe and translate. Can Translators, a registered language service agency from Kenya, was hired to transcribe and translate most of the audio-recordings from Kiswahili to English. Appendix 12 displays the certificate of their translation work. Also, Tanzanian students attending the University of Oslo or their peers were hired to transcribe and translate small parts of the some of the audio-recordings.

5.6.2 Transcribing

All observations were transcribed word-for-word, including exclamations and pauses, because the analysis considers all utterance in the classroom. The interviews do not include insignificant pauses and exclamations, but a detailed text from the conversations between the interviewee and the researcher. When transcribing, codes were used to make the transcription process more efficient and to add information that was not

available in the recordings, such as non-verbal acts. The explanations for the transcription codes appear in Table 5.2.

When transcribing the researcher used the computer software HyperTRANSCRIBE, version 1.6.1. The software is compatible with the audio files from the recording devices that were used in the research. It has an automatic loop function that makes it simple to control the playback of the audio. One can also control the speed of the audio, which proved to be very helpful when trying to capture what at first sounded as incomprehensive utterances, but when played at a lower speed became perfectly clear. The software also has a simple shortcut function that makes the transcribing process quicker (ResearchWare,2019).

The researcher transcribed the recordings made in the 5th grade English-speaking classrooms, leaving whatever was said in Kiswahili to a translator. The recordings of the Kiswahili-speaking 4th grade lessons were transcribed by Can Translators and translated into English. The language service agency also transcribed the Kiswahili-speaking parts of the interviews and translated the text. The translators were asked to transcribe everything into a document on the computer and follow specific guidelines to transcribe and translate (Appendix 11).

Table 5.2 Codes for transcribing

Explanation	Transcription codes
Pupil	P, Pg=girl, Pb=boy
Pupils (2 or more at the same time)	PP
Teacher	T
Pause	...
Observations or additional info, non-verbal acts	Within [] or ()

5.7 Data analysis procedures

The purpose of the analysis of the data collected in qualitative research is to make sense of them by reducing them to the core meanings and properly communicate the findings

(Patton, 2002). According to Patton, the core meanings consist of themes or patterns. Analyzing data can reveal themes and patterns.

Coding the data can assist in handling a large amount of data and “recognize patterns in qualitative data and turn those patterns into meaningful categories and themes” (Patton, 2002, p. 463). Bryman (2012) explains that coding is a method of sorting the data into important concepts that can be further discussed.

The following are the proceedings for the data analysis in this study:

1. The first step was to use the analytical tool, e.g. Tsui’s SCS, as a coding scheme and classify the utterances from the classroom into categories of acts according to their function in classroom verbal interaction. Any utterance that could not be explained by the SCS were interpreted as new emerging categories.
2. The PC software Nvivo version 11 was used when coding the data (QSR International, 2019). The software is a tool that stores, organizes, sorts, categorizes and analyzes qualitative data. In Nvivo data are sorted into nodes, which are basically the same as documents, representing each code or theme. For example, the different categories in SCS had their own node. The text was easily sorted into a node according to the category it represented by just marking the text and using a shortcut in the system instead of copying and pasting the text. By highlighting one or more categories within the text it is easy to find patterns. Nvivo can display each node in a specific color in a window on the side of the text. When a node is opened a document is displayed with the coded references to that specific theme or category. Nvivo also automatically calculates the number of references coded and the percentage covered of the original text, the transcribed lesson or interview.
3. Relevant field notes were not coded but were used to complement the interviews or added to the transcriptions of the lessons to complement the observations.

4. The next step was to analyze to what extent each act was used and look for patterns. Therefore, the proportion of the use of each act is measured in relation to all utterance in the classroom. Patterns of interactions are also examined. After the initial coding of the classroom talk each category of acts was exposed to the ‘open coding’ strategy (Strauss & Crobin, 1990), to uncover emerging themes of verbal interactions and themes within the categories of acts. The aim was to analyze the construction of the observed acts of the SCS and the construction of the verbal interactions. The latter means analyzing combinations of acts as they make up the verbal interaction patterns.
5. Open coding was applied to both the interviews and the observations. Strauss and Crobin explain that open coding is a “process of breaking down, examining, comparing, conceptualizing and categorizing data” (1990, p. 61). Bryman adds that “the process of coding yields concepts, which are later to be grouped and turned into categories” (2012, p. 569).
6. After that the analysis of the 4th grade and the 5th grade was done by comparing verbal interaction patterns, themes within the categories of acts and themes from analyzing the teacher-pupil verbal interaction.

5.7.1 The selection of data for analysis

A massive amount of data was generated from the 20 observations and the five interviews conducted. Since this was too much data to handle in a master’s thesis because of the time needed to code and analyze all the data, only a fraction of the collected data was selected for further analysis.

The criteria for selecting data for analysis was based on what would best serve the purpose of the thesis. The aim was to collect rich and thick data in order to perform an in-depth analysis of the texts and the transferability of the data (Bryman, 2012). Having coded the interviews and the lessons, one interview and two observations of lessons stood out in terms of richness and thickness. These were then finally selected. The

teacher taught lessons in the 4th grade and the 5th grade at the last school I visited during the first week. This school is henceforth called School A.

5.8 Validity and reliability

The reliability and the validity of a research determine the quality of research (Bryman, 2012). This section is considering the validity and the reliability of the research.

5.8.1 Validity

The validity of the research concerns “the integrity of how the research is conducted and of the conclusions generated (Bryman, 2012). To evaluate validity of research one can assess how well the research was conducted “according to the canons of good practice” (Bryman, 2012, p. 390), which can affect the credibility of the findings. According to Patton, in qualitative research “the researcher is the instrument” (2002, p. 14). compared to quantitative research which depends on constructed instruments to fulfil their purpose, for example, measuring and testing in order to establish the credibility of the quantitative methods used. In contrast, the “credibility of qualitative methods [...] hinges to a great extent on the skill, competence, and rigor of the person doing fieldwork” (Patton, 2002, p. 14).

With experience of dealing with translators in the field from previous research I was able to foresee and establish strategies to accommodate for potential challenges associated with using a translator. For example, I explained to the translator that assisted me in the field to translate every word in first person, using ‘I’, instead of ‘he’ or ‘she’ and not to summarize the questions or the answers from either me or the interviewees, so that the questions and responses were kept pure and not mixed with the translators own interpretations. I recognize that despite these efforts some word and meaning were lost in translation. This was the case when I later realized that the translator had not always followed my instructions, but I had another translator go over the audio-recordings of the interviews in order to capture as much pure data as possible.

In order to have a representable picture of what really goes on in the social setting that is researched, “the researcher seeks to collect data in naturally occurring situations and

environments, as opposed to fabricated, artificial ones” (Bryman, 2012, p. 50). This method is called ecological validity and is concerned with making sure that no fixed elements are introduced into the research and that the natural setting is left untouched (Bryman, 2012). Therefore, the non-participant observer role was used when conducting the classroom observations. However, according to Bryman (2012), one should still assume some degree of interference.

Simply by being present with the translator in the classroom could have affected the normal ways of interactions. However, as Bryman argues (2012), after some time the people in the room may not pay attention, being occupied by the activities. In order to mitigate the interference in the classroom during the lessons, I tried not to interact with the participants inside or outside the classroom except for speaking with the teacher to arrange the observations of the lessons and conduct the interviews. Arranging the interviews was another kind of interference since this created an artificial setting to a certain degree since teachers do not normally go to work for interviews. The teachers were interviewed during the recess or after school was over in order to mitigate the interference that the interviews had on their teaching schedule.

The research used triangulation of multiple data sources to cross-check the findings and increase their credibility and accuracy (Patton, 2002). This was done by examining whether the findings from the observations corresponded to the experiences of the teachers.

External validity in quantitative research is the ability to generalize the findings across different social contexts, but in qualitative research the researcher usually does not have the time and resources to foster a large enough sample that can represent the general picture of society (Bryman, 2012). In this study, the focus is rather on the degree of transferability, which parallels with external validity (Bryman, 2012). Transferability here considers the similarities between contexts (Lincoln & Guba, 1985) and is concerned with whether the findings apply to other contexts (Bryman, 2012). Bryman explains that obtaining thick description of the contexts increases the degree of transferability. Thus, I aimed at collecting and selecting data that provided thick description of the observations and teacher’s experience.

5.8.2 Reliability

According to Bryman (2012), reliability concerns the degree to which a piece of research is replicable in other settings and thus consistently reproduces the findings. In order to maintain reliability Bryman suggests that “complete records are kept of all phases of the research process — problem formulation, selection of research participants, fieldwork notes, interview transcripts, data analysis decisions, and so on” (2012, p. 392). In this way others can audit the research. For this study, a complete record of the research was kept.

In order to replicate research, one should use the same approach and methods. Bryman (2012) also suggests that in order to enhance the reliability of a study the researcher should take on the same social role, which in this case is a non-participant observer, to be able to replicate what is seen and heard. However, this may be complicated by the fact that the initial social setting and its circumstances change over time.

Training and preparation can assist in maintaining reliability (Patton, 2002). In this regard, I prepared a list of what to observe in the classroom and an interview guide which both were partly based on a preselected analytical tool. The analytical tool consists of established criteria of observations which allow for consistent analysis of all the observations. The research proposal developed before going to the field also assisted me with preparing the framework for work once I was there.

5.9 Ethical considerations

For ethical reasons, the researcher obtained consent from the participants of the research and treated all data with confidentiality (Bryman, 2012). First a research permit was obtained from the Zanzibari government to conduct and collect data for the research (Appendix 8). The letter of support from the University of Oslo served to prove my purpose in Zanzibar (Appendix 10). I was required to apply for a research permit for each school in advance of my visits, which allowed me to access the schools and conduct observations and interviews (Appendix 9). These permits were given to the headmasters and headmistresses. Both the headmaster and the teachers in each school

signed a letter of consent to participate and was in this way also informed of the purpose of the study (Appendix 5).

According to Bryman, a participant should be given as much information as possible about the research so that he or she is able to “make an informed decision about whether or not they wish to participate in a study.” (2012, p. 138). The letter of consent contains information about what it means to participate in the research and what will happen with the information collected by the researcher. They were informed in the letter that the participation was voluntary and that they could withdraw their consent at any time. In the letter they were asked to agree that they had received information about the research, to agree being interviewed and observed during the lessons and that the researcher audio-recorded both the interview and the lessons. They were given the letter of consent in their mother tongue, Kiswahili, to ensure they would understand, and all the teachers signed the letter. I assumed that the research permit and the teachers’ consent were sufficient to observe the pupils without their consent since the teacher is their caretaker while at school. However, I told the teachers and the headmasters to inform the parents about the research.

The participants are anonymous in the study in order to maintain confidentiality. The names of the schools, teachers or pupils are not displayed but replaced by codes, such as School A and pupils from School A. When transcribing the recordings names were replaced with comments such as “calls the pupils by his/her name”. No descriptions are included of the school or the class that could reveal the identity of the school, teachers or the pupils visited. The headmasters, headmistresses and teachers were informed about the anonymity and confidentiality of the study when the schools were visited. All data was securely stored digitally in a password protected laptop.

Since the chief project coordinator of TRANSLED assisted in finding the schools he signed an assistant confidentiality agreement in which he agreed to keep all the information on the participants confidential that he acquired (Appendix 6). The translator that assisted me in the field signed a similar agreement specifying his role as a translator (Appendix 7).

Since the translators had access to the audio recordings, they also signed a confidentiality agreement, which states that the translator must follow the ethical guidelines as they are described in the proposal and in the agreement (Appendix 4).

5.10 Conclusion

The research design and methodology guided the whole study from start to finish. The qualitative perspective and research design established what had to be done, how to do it and where to do it in order to achieve the purpose of the study. The methodology assisted in defining how the research was to be conducted. It defined key issues that could impact the quality of the research.

6 Data presentation and analysis

This chapter presents the data and the analysis. First it provides a description of the school visited and the teacher interviewed sorted into a school profile and a teacher profile. The next section presents the findings and analysis of the classroom observations. It displays the overall picture of the classroom talk, including proportions and the most prominent verbal acts and emerging category of verbal acts. It then explores the research questions based on three main themes of teacher-pupil verbal interaction identified. The two classrooms, the 4th and the 5th grade are compared throughout the chapter. Classrooms where Kiswahili is used as LoI are identified as 4th grade and classrooms where English is used as LoI are identified as 5th grade.

6.1 Profiles of the school and the teacher

This section provides an overview of School A and information about the teacher. It is supported mostly by the field notes and the field diary. Statistics specific to the schools at the time of the field research were requested of MoEVT and used in the presentation of the school profiles.

6.1.1 School A

From observation School A looked like a well-maintained school located next to a main road. The school consists of several buildings, both a primary and a secondary school. During my visit I was told that there are about 420 pupils attending primary and secondary level of education at the school. The part of the school which is dedicated to primary level of education is hereafter called primary school when referring to School A.

In October 2015, 275 pupils were enrolled in the primary school (MoEVT, 2015). Statistics from MoEVT (2015) from October 2015 display that the total number of pupils enrolled in the 4th grade was 50, of which 31 are boys and 19 are girls. In the 5th grade the total number of pupils enrolled was 38, of which 18 are boys and 19 are girls. In comparison (Table 6.1), from the observations of the class conducted in November

2015 a total number of 35 pupils attended 4th grade and 35 pupils attended 5th grade lessons. At the time of the observation the number of enrolled and attending pupils in the 5th grade lesson was identical. At the time of the observation the number of enrolled and attending pupils in the 5th grade lesson was identical. In the 4th grade there was a difference of 12 pupils between those enrolled and those attending. Of those absent, all but one was a boy.

Table 6.1 Enrolled and observed pupils in 4th and 5th grade in 2015, School A.

Pupils	4 th grade			5 th grade		
	Male	Female	Total	Male	Female	Total
Enrolled	31	19	50	18	19	37
Observed	20	18	35	17	18	35

According to MoEVT (2015), there were twice as many women than men in this school. The number of teachers in the primary school was 21, of whom 14 are women and seven are men. About half of the total number of teachers hold a degree of higher education and most of the others finished only the ordinary level of secondary education. Of these most are women. More than half of the men have a degree and less than half of the women have a degree.

I asked one of the teachers at the school what subjects were taught using English as LoI. After checking, she replied that in the 5th grade English was used as LoI in science, math, geography, English, ICT and history. After conducting observations and interviews I was told by the teacher I interviewed that teachers in rural schools get no additional training in the English language in contrast to all the teachers working in the urban schools, specifically schools in Zanzibar City.

6.1.2 The profile of the teacher of science

The profile of the teacher of science is based on the answers given by the teacher in the interview. The science teacher from school A is a female teacher and has been a teacher for six years. She is in her thirties, has a Bachelor of Science in biology and geography, and was doing a master's degree in Education through open and distance learning, which concerns the use of ICT in education. When she started working as a teacher at

the school, they had no teacher in chemistry. They asked her and she received training in chemistry. After that she started teaching chemistry and biology. The teacher expressed that she had taken no additional training in English.

She currently taught science, and had done so for 18 months, and ICT. She taught science in the 5th and 6th grade in 2014 and now, in 2015 in the 4th and the 5th grade.

Her mother tongue is Kiswahili. She had some knowledge of Arabic but knows English better than Arabic. She uses English inside and outside of the school. She had been offered to join a training program that aimed at improving English proficiency among teachers and assisting them in using the language when teaching. This project is called USAID ISS and was run in the capital city. According to her, it was the run by the MoEVT and some Americans who funded it. They used their own American teachers and curriculum. Even though it was only for urban teachers, she had managed to attend it for some time, but had to quit because she felt tied to the work here at the school.

6.2 Overall perspective on classroom talk

This section presents the overall picture of the use of each category of acts. The proportion of the use of each act is presented and analyzed. Table 6.2 represents the overall perspective on classroom talk in each classroom.

Table 6.2 The proportion of all classroom talking School A, by verbal acts

Acts	School A (% of all classroom talk)	
	4 th grade	5 th grade
1. A. Factual Q.	17.43	9.32
1. A. Yes-No Q.	1.20	1.56
1. A. Reasoning Q.	0	0.08
1. A. Explanation Q.	0	0.40
1. B. Opining Q.	0	0
1. B. Information Q.	1.81	1.47
1. C. Re-stating Elicit	5.94	7.91
2. Direct	1.88	3.53

Acts	School A (% of all classroom talk)	
	4 th grade	5 th grade
3. Nominate	5.97	3.39
4. Inform	6.94	11.29
5. Recapitulate	5.25	5.89
6. Frame	7.03	1.67
7. Starter	1.13	0.49
8. Check	2.18	3.05
9. a) Evaluate Positive	0.85	1.70
9. b) Evaluate Positive Evaluate Negative	0.11	0.18
10. Accept	4.52	1.53
11. Comment	1.13	1.42
12. Clue	0.17	1.31
13. a) Reply: Restricted	22.47	22.77
13. a) Reply: Expanded	0	0
14. Apologize	0	0
15. Request	0	0
16. Elicit	0	0
17. Interrupt	0.17	1.28
Direct verbal repeat (new category of verbal act)	2.37	4.56

One new significant category of verbal act emerged from the data and is called ‘direct verbal repeat’ (Table 6.2). This category is realized by pupils following the dictation of teacher’s talk initiated by the teacher. The teacher uses a clear and strong voice more than what is normal and reads out a text, or repeat a previous answer, in order to direct pupils to repeat after the teacher. Here is an example from school A, 5th grade. In parenthesis are words translated from Kiswahili to English:

T: (We read together, ok?) ...Soil...

PPs: Soil

T: is a mixture.

PPs: is a mixture.

T: of mineral matter.

PPs: of mineral matter.

This act emerged as a result of the teacher directing pupils to repeat words and sentences several times. Mostly with the use of factual questions, which is presented in this chapter, but there was no verbal act for whenever the teacher expected pupils to repeat the words after her as in dictation.

6.2.1 The proportion of classroom talk in the 4th and the 5th grade

Table 6.3 The proportion of classroom talk in school A, by teacher and pupil talk.

	4th grade (% of classroom talk)		5th grade (% of classroom talk)	
	Initiate	Respond	Initiate	Respond
Teacher talk	59.13	6.78	57.66	6.14
Total	65.91		63.8	
Pupil talk	0.17	22.47	1.28	22.77
Total	22.64		24.05	

There is a disproportion in classroom talk. In both the 4th and the 5th grade findings show that the teacher talk is more than three times as much as pupil talk in the 4th grade (Table 6.3). In the 5th grade the teacher talk appears to be less than three times as much as the pupil talk. However, the percentage of teacher talk is about the same for both grades. The proportion of the teacher's responses and the teacher's initiative to talk is about the same in both grades. The same goes for pupils' response. There is an insignificant amount of pupils' initiation which consists mostly of pupils interrupting the lesson or the teacher. However, in this regards the grades differ slightly. The pupils' initiation in the 5th grade is 1 percent higher than in the 4th grade. The findings suggest

that the classroom talk is based heavily on the teacher initiating the talk, using both English as LoI and Kiswahili as LoI.

Table 6.2 shows that two of the more linguistic challenging categories in pupil talk, ‘opining questions’ and ‘expanded response’, were not used in any of the classrooms visited, thus the pupils were not asked to express their own feelings, opinions, judgement and evaluation (Appendix 2).

Although the proportion of classroom talk is somewhat similar in the two grades, verbal acts differ significantly between the two grades (Table 6.4). The six most used acts are displayed in ranking order according to their proportion when used. Pupils’ restricted response is clearly the act most used in the classrooms. However, it is also the only significant contribution that the pupils make to the teacher-pupil verbal interactions. The high percentage of the use of pupils’ response is in accordance with the high percentage of factual questions, which elicit restricted short replies (Appendix 2), and the ‘restate elicit’, which restates the questions several times.

Table 6.4 Frequency of acts in the 4th and 5th grades in School A, %.

Ranks	Grade 4		Grade 5	
	Acts	% of classroom talk	Acts	% of classroom talk
1	Pupils’ response (Restricted)	22.47	Pupils’ response (Restricted)	22.77
2	Factual question	17.43	Inform	11.29
3	Frame	7.03	Factual question	9.32
4	Inform	6.94	Restating elicit	7.91
5	Nominate	5.97	Recapitulate	5.89
6	Restating elicit	5.94	Direct verbal repeat	4.56

Both grades display three similar acts used by the teacher (Table 6.4): factual questions, restating elicit, presenting information (‘inform’). The proportions of these acts differ from one classroom to the other, thus the ranking of the acts is not the same for both grades. The extensive use of factual questions in the 4th grade is twice as much as in the 5th grade. In the 4th grade the teacher uses English for about 14% of the factual questions

when it is supposed to be a Kiswahili-speaking class. At the same time data shows that about 75% of factual questions are spoken in Kiswahili in the English-speaking class.

When the teacher is restating elicit, most of these questions' characteristics are the same as 'factual question' because they often repeat or simplify the factual question. This in fact means that one can add the proportion of using 'restating elicit' to the proportion of 'factual question'. In the concrete cases this corresponded to 23.37% in the 4th grade and 17.23% in the 5th grade. Therefore, with this new addition to 'factual question', the teacher in the 4th grade seems to use more than a third of the teacher talk on factual question when comparing the total amount of teacher talk displayed in Table 6.3 with the 23.37% t. In comparison, the 5th grade, the teacher uses a little less than one third of the teacher talk on facilitating factual questions. However, three fourths of the questions were asked in Kiswahili when English was supposed to be LoI.

The act 'inform', whose function is to present information to the pupils, is the most used act by the teacher in the 5th grade with 11.29% of all classroom talk. Compared to the 4th grade, the proportion of providing information to the pupils in the 5th grade is twice as much as.

Table 6.4 displays two verbal acts used by the teacher in the 4th grade, which are not found in the 5th grade. These are 'frame' and 'nominate'. The act 'frame' consisted of 7.03 percent of the classroom talk and was used by the teacher for telling pupils along the way what they will be doing in the classroom along the way (Appendix 2). The 5th grade displays only 1.67 percent of the classroom was used on the act 'frame'. Table 6.4 shows that the teacher in the 4th grade used 5.97% of classroom talk to nominate pupil answers to the teacher's elicits (Appendix 2). In comparison, in the 5th grade only 3.39% was used to call on pupils to reply to elicits.

In the 5th grade two verbal acts that are not displayed in the 4th grade top six prominent acts in the classroom are the 'recapitulate' and the 'direct verbal repeat'. The former was used to repeat information that was previously provided. The proportion of realizing this act the both the classrooms is indicated at 5.25 percent of all classroom talk for the 4th grade and 5.89 percent for the 5th grade. The classrooms are almost

similar regarding how much the teacher repeated the information which she provided. According to Table 6.2 ‘direct verbal repeat’ was used twice as much in the 5th grade than in the 4th grade. In the 5th grade 4.56 percent of the overall classroom talk was used while only 2.37 percent in the 4th grade.

6.2.2 Main themes of teacher-pupil verbal interaction

Exploring the research questions, three main themes of teacher-pupil verbal interaction were identified. These are code-switching and code mixing, repetition routine and the coordinated chorus. Each theme is sub-divided to explain how they are constructed and what patterns of verbal interactions appear in each of them.

Code-switching and code-mixing

Code-switching is a strategy to switch from one language to another and then back again to solve e.g. a communication issue. It can occur from sentence to sentence. Code-mixing occurs within a sentence and a person usually changes the language because of low proficiency in both languages (Brock-Utne & Holmarsdottir, 2003). The most exposed classroom to code-switching was the 5th grade, where about 46.5% of the classroom talk was in Kiswahili when the LoI is supposed to be English. About 43.1% of the total accounts for teacher talk and 3.4 percent for pupil talk. In comparison, in the 4th grade only 4.8 percent of the teacher talk and 6.6 percent of the pupil talk was in English, i.e. a total of 11.4%, when the LoI is supposed to be Kiswahili.

In the 4th grade the verbal interactions that elicit the use of English is based on the teacher introducing English words into the lesson, such as indicated here in the extract from the lesson. The English word is in parenthesis:

T: Plants are called (Plants) in English. How do we call them?

T and PPS: (Plants).

T: It's called?

PPS: (Plants).

T: Come up once more?

PPS: (Plants).

Most of the time the teacher first reveals the word in English and then she asks what it is called in English, which is a factual question. A few times the teacher asks the pupils to translate the word from Kiswahili to English, which they manage to do most of the time. They failed once, saying “mango tree” in English when the correct English word was “orange tree”. The pupils answered incorrectly although the correct answer was already written on the blackboard (Figure 6.1). Even the blackboard was used to write both in Kiswahili and English for this lesson.

Figure 6.1 Text written by the teacher on the blackboard in the 4th grade, School A

<p>Mimea (Plants)</p> <p>Muembe (Mango tree)</p> <p>Mnanasi (Pineapple plant)</p> <p>Mchungwa (Orange tree)</p> <p>Makundi ya mmea (Type of plants)</p>
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The interaction patterns of the teacher when switching the LoI from Kiswahili to English are shown in Figure 6.1. Starting with the teacher’s initiation, the pupils are first taught the English word followed by a factual question eliciting a short and restricted response, to which the teacher

joins in. The teacher then restates the previous elicit and the pupils reply with the same answer. The teacher restates the elicit again to generate the same response from the pupils. This is repeated eight more times until the teacher continues on to the next task. This was an extensive repetition routine, with the first part showing how English is used in the classroom.

In comparison, in the English-speaking class, Kiswahili is not only used as LoI when asking what things are called in Kiswahili, but also when the teacher asks questions about the topic, providing information about the topic, and when used for other verbal acts. Pupils answer in Kiswahili whenever the teacher is initiating the talk in Kiswahili, especially the second half of the lesson when it seemed like the teacher switched the LoI completely from English to Kiswahili for the majority of the time. However, English words are occasionally used to emphasize some of the words for the topic of the lesson.

The general picture of the teacher-pupil interactions in the 5th grade is as follows: Whenever English is used as LoI, the teacher proceeds with an extensive routine repeating the topic's definitions or words, as in the example below. The words in Kiswahili are in parenthesis:

T: (That is why the process is known as) Nitrogen fixation (it's called?)

PPs: Nitro...[few try to answer].

P: Nitro.

T: Nitrogen fixation. [Writes "Nitrogen fixation" on the board]

PPs: Nitrogen...[1/2 try to answer].

T: Nitrogen fixation.

PPs: Nitrogen fixation. [Last word is a little unclear].

T: Nitrogen fixation.

As seen in this extract pupils struggle to pronounce the words and the teacher continues to direct verbal repeat as the pupils reply with the same word three more times after this example. This verbal interaction pattern is repeated most of the time that English is used as LoI. Kiswahili is used as LoI when the teacher explains in depth what the definition means and when the teacher adds details to the description of the topic. However, when Kiswahili is used as LoI instead of English the teacher usually initiates several checks each time, which elicits a "yes" from the pupils, as seen in the example of the observation that follows. All talk is in Kiswahili, but has been translated. The teacher is code-mixing for which reason English words are in parenthesis:

T: Termites...those also (mixes) the soil, we understand?

PPS: Yes

T: Do we know them?

PPS: Yes

T: They too (mixes the soil)

T and PPS: the soil

T: Snails, all those are (soil organisms) do we understand?

PPS: Yes

T: Do we understand well?

PPS: Yes

T: Everyone understands well

The verbal interaction pattern here starts with the teacher providing information to the pupils and then asks if they have understood, in order to check on their progress, as explained in the category “check” (Appendix 2). The pupils always answer “yes” to the teacher’s ‘checks’ and other questions that elicits a “yes” or “no”. Then the teacher elicits an ‘information question’ which asks for a reply she does not know in advance, or which one should assume (Appendix 2). The teacher joins in on the reply. Then the teacher provides some more information and attaches a ‘check’ question, which elicits a “yes”. The teacher restates the question and as expected the reply is still “yes”. The teacher evaluates the pupils and gives them a positive evaluation and lets them know they understood well. One can see that the verbal interaction is more complex and has a wider variation of verbal acts than in the previous example when English was used as LoI in the 5th grade.

The overall picture of the classroom verbal interaction in the 5th grade is described as following. The teacher introduces definitions and key words related to the topic using English as the LoI and the teacher directs pupils to repeat these definitions and words and assist the pupils in pronouncing them in English. When explaining in depth about the topic and how the definitions are applied in the nature the teacher switches to Kiswahili. This interaction happens repeatedly during the whole lesson. The teacher

uses Kiswahili 31 out of 33 times when realizing the act ‘inform’ to explain the topic and impart knowledge about it. Following example displays how this interaction acts out. Words in Kiswahili are in parenthesis:

T: (In that topic it) mix soil.

P: Mixed soil.

T: Mixed soil...Mixing of?...

P: Soil

T: Soil...Mixing of?...[Writes "Mixing of soil top soil and sub soil" on the blackboard].

T and PPs: Soil. (1/2 answer).

T: (Who here will mix the sand, soil, that topsoil and) subsoil. (It) mixes (two things, right? Topsoil and subsoil, earth worms. Ok, and its movements, you see it crawl like that, isn't it? It also causes the mixing of that soil)

Kiswahili was used for explaining the core ideas of the topic while English was used to introduce and repeat the words. One can also identify the use of codemixing on key words of the topic. When the teacher is explaining the topic, she uses the English words “subsoil” and “mixes” in between the sentences.

In comparison, the overall picture in the 4th grade is described as following. About one third of the lesson the teacher is imparting knowledge about how to say different flowers and other key words in English, and pupils are directed to repeat the English words. The other two thirds of the lesson the teacher uses on short explanations about few concepts that were introduced by the teacher and the pupils are requested to repeat the words from the concepts. During the lesson the teacher asks for examples of the different concepts, such as examples of middle-sized plants. The following extracts from the observation in the 4th grade displays how the most teacher-pupil interactions

acted out. The first example the teacher introduces a concept. English words are in parenthesis:

T: Now plants are divided into various types

PPS: Various types.

T: For the topic of we are coming to types of plants. (Types of plants) together.

PPS: (Types of plants)

T: (Types of plants).

PPS: (Types of plants).

In this second example the teacher teaches the pupils the English word for “mfano”:

T: We call this mfano (farm plants) in English.

PPS: (Farm plants).

T: (Farm plants).

PPS: (Farm plants).

T: Okay, let's look at an example of plants which is middle size.

What is similar in both the 4th and the 5th grade is that the teacher uses Kiswahili when explaining the core ideas of the topics. In both classrooms the pupils are directed to repeat the introduced words, concepts and definition in English, except for when pupils in the 4th grade use Kiswahili half of the time when repeating them.

During the lessons the teacher put much effort into ensuring that key words of the topics were translated and after the translation repeated them several times as displayed in the aforementioned examples. Much of these translations were carried out by the teacher, but she asked the pupils to translate the words a couple of times in the 5th grade and

several times in the 4th grade. The following two examples are from the 5th grade and the words in Kiswahili are in parenthesis:

T: Soil (in Kiswahili, what do we say?)

PPs: Udongo (Soil). [Almost all answer].

The second example:

T: (What is centipede called in English?) ...It is called...

T: Centipede.

PPs: Centipede.

In the first example, the pupils managed to translate the word correctly from English to Kiswahili. In the same lesson pupils were asked to translate from Kiswahili to English, as seen in the second example. However, they did not reply, and the teacher told them the word instead.

In the 4th grade the teacher asked the pupils to translate especially names of plants, as in the following example. Words in English are in parenthesis:

T: Coconut tree, how do we call coconut tree in English??

PPS: (Coconut tree).

The pupils managed to translate the word though some words were written on the blackboard, also in English. However, “coconut tree” was not written on the board in advance. Most of the definitions and words related to the topic were written on the blackboard in the 5th grade. When the teacher asked questions to check how much pupils understood some pupils took advantage of the answers already written on the blackboard. Following are two examples of how that acted out:

T: What is a soil organism?

Pg: Soil organism are those organism living in the soil. [The girl looks at the blackboard which displays the answer she gave]

However, some pupils struggle to reply the teacher even though the answer is written on the board:

Pb: Soil is...Soil is mixtrue. [The boy is reading the definition from the blackboard when answering].

T: Mixture.

Pb: Mixture

T: Mhm.

Pb: of miniral matter

T: Mhm.

Pb: water, air

T: Ehe.

Pb: Human

T: Ehe (Yes).

Pb: and living organism.

T: Very good.

From the observation notes there were three other pupils that used the blackboard when answering the teacher, but some could not read the answer. The second example displays how the teacher encourages the boy to continue to answer by accepting each word that he says as correct.

Repetition routine

A prevalent mode of verbal interaction in both the 4th and the 5th grade is the repetition routine which is started by the teacher. This routine can be understood by investigating one of the most used acts in both classrooms, factual questions.

The teacher frequently asked questions that consisted of unfinished sentences or statements that the teacher wanted the pupils to finish. This is one example from the 4th grade:

T: ...you have seen these examples of plants?

PPS: Yes.

T: Now these are various examples of?

PPS: Plants.

Sometimes the sentences could be longer as seen in this extract from 5th grade:

T: So... Soil is a mix of mineral matter...water, air, human and living organism that is plants and...

T and PPs: animals. (One barely hears the pupils answer).

In this type of question, the teacher starts a sentence, leaves out the word that completes the sentence and before pausing to a complete silence the teacher has a rising intonation of his/her voice on the last word as if it is a question. After the silence the pupils reply with the word or words that complete the sentence. The pupils answer in chorus when this type of question is used with a few exceptions where the teacher joins in or leads the chorus, as seen in the second example. This is not a what, where or when question, which characterizes factual questions, but it asks for completing the information with only one acceptable answer, which is the criterion for factual questions. Requesting pupils to complete the sentence encourages participation by the whole class to join in a chorus. As seen in the first example, the function of this type of question is to repeat previous information. The same goes for the last example, because the teacher wrote the

definition of soil on the blackboard and tried to have the pupils repeat the definition in some interactions right before the question and when answering to the question. 28 out of the 80 registered factual questions in the 4th grade was the use of unfinished sentences when used as factual questions. In the 5th grade it was used 31 out of 77 factual questions.

The questions with the incomplete sentences are often the root of the start of extensive repetition of a definition or word. Here is one example of how the use of English as LoI affected the verbal interaction and interaction pattern which resulted in an intensive repetition routine. The translated words from Kiswahili to English are in parenthesis:

T: (After understanding the meaning of soil, just let us look at one component which makes) soil, which is about...soil organism. [Writes "Soil organisms" in English on the blackboard].

P: Soil organism.

P: Soil organism.

P: Soil organism.

T: Together. Soil organism.

PPs: Soil organism.

T: Soil organism.

PPs: Soil organism.

T: Soil organism.

PPs: Soil organism.

T: [Walks to a boy's desk and stands there during the exercise]. (Calls a mentally disabled boy by name)...Say: Soil organism.

Pb: Ss ss.

T: Stand up...Soil organism...[The boy stands up]

Pb: Ss.

T: Say: Soil organism

Pb: Soil. [A little unclear].

T: Organism.

Pb: Organism.

T: Soil?...

Pb: Organism.

T: Soil [calls the boy by his name] soil...Soil?...

Pb: Soil.

T: Organism.

Pb: organism

T: Soil?...

Pb: Soil

T: Organism

P: Organism. [Unclear].

T: (Together...Boys!) Soil organism.

PPs: Soil organism. [Only boys answer].

T: Soil organism.

PPs: Soil organism. [Only boys answer - a little disharmonious towards the end].

T: Soil organism.

PPs: Soil organism. [Only boys answer - a little disharmonious towards the end].

T: (Girls!).

PPs: Soil organism. [Only girls answer].

T: Soil organism.

PPs: Soil organism. [Only girls answer].

T: All together. Soil organism.

PPs: Soil organism.

T: (Alright...)

The teacher directs the pupils to repeat mostly the same words about 18 times. A mentally disabled boy is directed by the teacher to participate. The boy struggles to repeat the words that the teacher is directing him to repeat. To elicit the repetitive replies from the boy and the rest of the class, the teacher initiates ‘direct verbal repeat’ which is dictating what the pupils are to reply, and factual questions with incomplete sentences that elicits pupils to the one answer the teacher is looking for. The teacher also nominates pupils to repeat the words. The teacher ends the repetition routine by accepting the pupils’ responses with an “Alright”.

The most intensive repetition routines were realized by the teacher using the ‘direct verbal repeat’ act. As seen in the last example, the act was realized whenever the teacher said the words, without being realized as a question, in order to direct pupils to repeat after her. This verbal act was realized in the most intensive repetition routines in both the 4th and the 5th grade.

Coordinated chorus

The pupils' responses were most of the times coordinated and two or more, most often the whole class, responded in chorus when the teacher required them to do respond. In the the 4th grade about 18.15 percent of the classroom talk consisted of pupils' chorus. They responded with the use of chorus 153 out of 195 times, about 80 percent of all pupils' responses, whereby five times the teacher lead or joined the chorus. Chorus was mostly used in the second half of the lesson. In the 5th grade the proportion of classroom talk of which consisted of pupils' chorus was about the same as in the 4th grade, just slightly higher with 19.40 percent. The amount of pupils' responses that were coordinated to choruses were about 10 percent more in the 5th grade than in the 4th grade. In the 5th grade 195 out of 225 times, almost 90 percent of the responses were replied in choruses.

Most of the times pupils seemed to know when the replies were to be coordinated to choruses. The findings indicate that there are some rules of verbal interactions that can notify pupils when to reply in chorus. The first one is very direct. The teacher used the verbal act 'nominate' several times in both classrooms to call on pupils or give them permission to reply (Appendix 2). This is realized when the teacher calls on everyone or just groups of pupils to answer. Following show an example of this from the observation of the 4th grade. The words in parenthesis are in English:

PPS: (Plants.)

T: girls.

PPS: (Plants.)

T: boys.

PPS: (Plants)

The teacher directs them to repeat the word several times and even makes a variation in the repetition routine by switching between the boys and girls. In the 4th grade the act 'nominate' is used to call on everyone in the class to answer 13 out of 40 times. It is a

little less in the 5th grade as pupils were nominated to answer in chorus 11 out of 49 times. One could think that ‘nominate’ is the act that encourages chorus when that act is related the teacher calling on pupils to, but it is not the case. The findings indicate that the three acts directing pupils’ choruses are the ‘factual question’, the ‘restating elicit’ and the ‘direct verbal repeat’ which also encourages most choruses. When the teacher is interacting verbally with the pupils by eliciting replies with the use of incomplete sentences a chorus usually follows when pupils are replying, as seen in the examples from the previous section. This is a less direct way to notify the pupils to reply in chorus by completing the sentence. Here is an example from the 4th grade:

T: Good, those are various examples of?

PPS: Plants.

T: Then today we have learnt about groups of?

PPS: plants.

What seems the indirect way to notify pupils when to join in on a chorus when replying the teacher can be explained by the act ‘direct verbal repeat’. Following is an example of this act realized in the 4th grade. The words in parenthesis are in English:

T: Is there anyone who know how we call ginger in English? (ginger), what?

PPS: (ginger).

T: (ginger tree) yes?

PPS: (ginger tree).

T: (Ginger tree).

PPS: (Ginger tree).

T: (Ginger tree).

PPS: (Ginger tree).

After the pupils replies two times with the same answer the teacher just repeats the words to initiate the chorus and the pupils' third and fourth reply. All the three examples also display how pupils replying in chorus and the repetition routine are connected. Most of the replies in the repetition routine in both the 4th and the 5th grade are performed with pupils' chorus.

The choruses were not always in harmony and not always had 100 percent participation. Field notes and audio-recordings captured this. Here are three examples extracted from three different instances:

PPs: Nitro...[few try to answer].

PPs: Soil organism. [Only boys answer - a little disharmonious towards the end].

T and PPs: Soil. (1/2 answer).

6.3 Teacher's experience

In exploring the research question on how teachers experience teacher-pupil verbal interactions using Kiswahili or English as LoI, the following themes were identified: the importance of using Kiswahili and English as LoI; the challenges of using the two languages; coping strategies for dealing with the challenges; and suggestions for improvements. Most of the challenges concern the use of English as LoI though the interview questions were constructed in such a way that it would be possible to elicit answers concerning the experience of using both Kiswahili and English as LoI (Appendix 3). The cited text in this section is extracted from the interview with the teacher from the selected school for the analysis.

The importance of using LoI when interacting with the pupils

First, one should establish how the teacher perceives LoI and teacher-pupil interaction. When asked about how the teacher defines the communication between the teacher and the pupils, she replied the following:

Communication between the teacher and the student is that state of closeness between teachers and the student.

When we say closeness between teachers and students, it is that state of friendship, closeness in communication, closeness in... like... it like educating each other

When she was asked what good communication is, she replied:

Good communication is where there is a feedback.

The teacher explained what she meant by “feedback”:

For example, during the lesson, I was looking for some ideas from the student. I need to get ideas from the student, I might get that idea from the activity I gave to him/her. ...But I took them to that place, said “take a look then tell me what this is called”. All of them said unanimously that it is soil. I straight away got what I was looking for.

From her responses, it seems that the verbal interactions between the teacher and the pupil are defined as what she calls the closeness between the teacher and the student, which can be understood as the state of the social relationship that they are in, such as friendship. She states that good communication requires feedback, which means receiving a response from the pupils after eliciting a specific reply. Thus, verbal interaction is about asking for and giving responses

The teacher was asked how she perceived the role of LoI. She replied:

this time,... it's a student-centered approach rather than a teacher-centered one. So, when you want student participation, then you have to start with something the student understands, which again is tightly linked to the language he/she understands, and then slowly take him/her to something he did not know yet.

The very first role of the teaching language is exactly that one: Delivery itself. You understand? That delivery of that lesson. Are you with me? The other role is this one: to build a relationship.

According to the teacher, LoI builds this relationship between them and thus LoI facilitates for teacher-pupil interaction. She also defines LoI as the means of delivering the lesson to the pupils. The teacher defines the importance of LoI by explaining that using a LoI that the pupil understands one can encourage pupil participation which upholds a student-centered approach.

Challenges experienced with verbal interaction and the use of LoI

When interviewing the teacher several challenges with the use of LoI and teacher-pupil interactions were revealed. The teacher was asked how the change of LoI affected her teaching. She expressed the following challenge with the introduction of English as LoI:

You cannot go shoulder to shoulder with the syllabus, straight ahead as it dictates...From this time to that time, you are expected to have taught this subject. Okay? But, that subject, once you enter a new language, there is a level of understanding needed. So, you find yourself teaching the subject 2 times, and the pupils haven't understood a thing. Because it is difficult. Because that thing is difficult, it is foreign. Or isn't it? The kid hasn't understood a thing. How can you then go ahead You can't.

According to the teacher, it is difficult to keep up with the syllabus when English is used as LoI, because the subject needs to be taught repeatedly at least two times, which still does not guarantee that the pupils will understand. She explains that the intervention of introducing the new LoI needs another level of understanding and she calls the language foreign.

When asked how much pupils understood what was being taught in the English-speaking classroom she said: "If you do not translate, it will be a percentage below fifty". In comparison, when using Kiswahili as LoI the understanding of the lesson content would reach "a very big percentage. I can reach 70, 80, up to 90 percent".

This can be interpreted that the introduction of English as LoI in the 5th grade weakens the teacher-pupil verbal interaction when the pupils understand so little of the lesson the teacher is trying to convey. Although the teacher paints a negative picture of the introduction of English as LoI at primary school, she does think of it as a positive change for the pupils, saying: “I think it would be better for building future student. It will be better.”.

However, there are more challenges. Language proficiency is one of them. When asked what she felt when using English in the classroom she said that she felt good, because she and the pupils can improve their English. She provided this example:

Last year, I was giving a lesson about animals and their groups – omnivores, carnivores and herbivores. At one point, I luckily forgot the English name for kifar (rhino). I am standing there: “hmmmmn! This kifar, how is it called in English?”. The students shouted to me: “hippo!”. I immediately went out, from the classroom, followed another teacher, and asked him: “please help me, this kifar, what is it called?”. He told me: “hippo”. You see, there I had learned something from the students!

There are two significant findings about English proficiency in this classroom. Though this was the year before, it shows that when teaching science in English the teacher did not know the name of the animal and she expressed that she relied on help from the pupils and another teacher so much so that she even interrupted the lesson to ask the other teacher. The most significant part of this extract from the interview is that when sharing the experience, the teacher manages to say the wrong name of the animal as if it was still the correct answer, even the year after the experience. “Kifar” means rhino in English and she repeated “hippo” in English several times. This displays limited English proficiency and that the pupils and the other teacher all had the same difficulty.

About the issue of limited proficiency, the teacher said:

It's like for example they just want the child to know it straight away. It's very difficult with a foreign language. The child will be willing to try to speak it, but he/she can't, because this thing is difficult.

She points out that even if the pupil tries to speak English it remains a foreign language which is difficult to speak, so difficult that the pupil can't speak it. In this way the limited English proficiency directly affects the ability to interact verbally. Although the teacher elicits replies it would always be a one-way conversation unless the pupils can speak the language. According to the teacher, with the change of LoI to English, the pupils are expected to know English straight away, however this is clearly not the case.

The challenge of limited proficiency extends especially to pupils that are mentally disabled as it was observed with a pupil in the 5th grade. According to the teacher:

Because, like there you see those groups which... those who need special aid like those there, you find yourself in a need to help that child with pronunciation first, before using English.

During the lesson the teacher used several minutes to help the child pronounce two words "soil organism" in English. One can imagine the implications an unknown language can have on pupils who are already having difficulties speaking in their own language.

Coping with the challenges

Sharing experiences about the use of LoI, more specifically the change to English as LoI, the teacher also shared how they coped with the challenges. This she did by adopting several strategies. These strategies are: translating, switching languages and hiding her own inability to speak English.

It was observed that in the 5th grade the blackboard contained many of the answers to the teacher's questions and pupils were actively reading from the board when the teacher asked questions, thus they answered correctly on most questions. Therefore, I asked her what would happen when she evaluated their progress on the lesson if the text was erased from the board, e.g. a definition written on the board. She replied:

You know, when teaching Kiswahili, the rule when evaluating the student after a lesson, the rule is to clean the blackboard before you evaluate the student. You get me? But now, because of a foreign language, you'll notice that, for example

there I asked “what is soil?” and the answer was on the blackboard. I was supposed to have cleaned it but I knew that, because of the difficulty with the language, I could help the students. The student might be trying, but I intentionally left it there, but I can tell you one thing. You too saw it: Something written on the blackboard and yet the students fail to read it!

To ensure that pupils could participate and interact verbally with the teacher by answering her questions in the 5th grade, the teacher would intentionally keep the text on the blackboard so that the pupils could just read the answer. However, she pointed out that even then pupils would have difficulties reading it. In comparison, she said she would erase the text before asking questions to evaluate the pupils’ progress when using Kiswahili as LoI, but she did not do that during the observations of the lesson in the 4th grade.

Instead of showing the inability to initiate classroom talk the teacher employed the following strategy when the language appeared as a barrier for interacting with the pupils:

So, in that situation, instead of losing your confidence in front of students who trust you, because of something you have forgotten or don’t know, you can tell them to take it as a homework.

With such a strategy she ensured she maintained her authority as a teacher and pretended that her inability to initiate the talk was a part of the task of the homework, to find out for themselves what she forgot or did not know.

Translating or switching languages is another strategy the teacher used when coping with the challenge of poor understanding during the use of English as LoI. When asked if she translates in the 5th grade from English to Kiswahili and how much, she replied the following:

I do translate. I translate the important idea the student is expected to remain with. Understand? Because... I can teach anything, but what is the core element

the student is to leave with? The student is to be able to answer this, to pick-up this and this and this.

It was observed that she often switched from teaching in English to Kiswahili in the 5th grade lesson. What seems important for her is that pupils at least can acquire the knowledge about the core elements of the lessons. According to the teacher, when translating in the 5th grade the level of understanding can reach “fifty percent, seventy, even eighty “.

It was observed that the teacher also translated and switched LoI from Kiswahili to English in the 4th grade lesson, where Kiswahili was supposed to be the LoI. She did this to a lesser extent than in the 5th grade and usually it concerned names of the items related to the topic that was taught. When asked how much she translated from Kiswahili to English she said “50/50”, meaning 50 percent use of English and 50 percent Kiswahili. The teacher was then asked if she had translated from English to Kiswahili the previous year in the 4th grade and she replied:

We used to do it, but not too much of that. Because from the start up to Standard 4, it is Kiswahili only.

With Kiswahili there was no need to translate to English. It was the children and their Kiswahili. But now they are entering a new curriculum, a new way of introducing English. There is a great need for us to translate for them to have a good foundation.

Before the change of LoI from Kiswahili to English there was little use of translating from Kiswahili to English in the 4th grade because there was no need for them to do that. However, now the teacher said that because of the change they need to translate from Kiswahili to English in the 4th grade in order to prepare the pupils for the use of English in the 5th grade.

Suggestions of how to solve the challenges

The teacher suggests that English as LoI would be introduced slowly, not as suddenly as it is now. She suggests that Kiswahili which is also used at home and as LoI in the first four years of primary school is used as a basis for understanding English. This corresponds with the strategy the teacher mentioned about preparing the pupils for the 5th grade by translating 50 percent of the lesson from Kiswahili to English.

The last suggestion the teacher emphasized concerned the support given to teachers. When asked if she wanted to add anything at the end of the interview she answered:

What I need to add especially is that the teacher needs some support as a teacher, so that he/she can have confidence. Because this matter messes up the confidence of the teacher. We need to build the teacher as such, in his dealing with the use of English in classroom situations. Right? That can give the teacher more tools to teach the pupil, feeling he is learning English but also knowing that he belongs to Kiswahili.

After mentioning the English training project that USAID hosts in relation to supporting the teachers, she said:

Because once you introduce a new curriculum, when you bring a new curriculum to teachers, you need to think about teachers first, so that they fit in the new curriculum. You understand? That means that if this issue had been addressed earlier, anything that will follow will neither be foreign to teachers, nor difficult for students.

It seems that appearing as a confident teacher is important for her. She expresses that the change of LoI to English makes teachers more vulnerable because they lose confidence. In order to correct this the teacher suggests that when implementing such a change the first focus should be on supporting the teachers in adapting to the new changes, giving them more tools to use when teaching and preparing the teachers on how to deal with the use of English in the classroom. It is important for her that, although learning English is important, the teachers should be able to identify

themselves with their mother tongue. She states that the issues they are facing with the new LoI should have been addressed earlier so that the language would not appear foreign to the teacher or difficult for the pupils.

6.4 Conclusion

This chapter presented a description of the school, 4th and 5th grade and of the teacher's background, both academical and lingual. The overall perspective on the classroom talk shows that the proportion of pupil and teacher talk similar in the two grades, but that the teacher and pupil talk in each classroom was disproportionate. Teachers talk occupied most talk in the classroom. The 4th and 5th grade differ in some of the most prominent verbal acts in the classrooms, but several are similar too. When exploring the research questions three main themes of teacher-pupil verbal interactions emerged:

codeswitching and codemixing, repetition routine and coordinated chorus. It was presented how these were constructed. The switching was seen in the use of the most prominent verbal acts. Code-switching also affected the use and the combination of acts. The most prominent verbal acts that were realized in the classroom displayed a method of repeating words and sentences, namely repetition routines. In connection to these routines the pupils' replies were mostly coordinated choruses. The pupils were notified directly and indirectly when to join in the chorus.

When exploring how the teacher experiences teacher-pupil verbal interactions using Kiswahili and English as LoI four themes emerged: importance of using Kiswahili and English as LoI; the challenges of using the two languages; coping strategies for dealing with the challenges; and suggestions for improvements. The teacher defined that teacher-pupil verbal interaction is based on the social relationship they have and that it requires feedback to work well. The teacher also defined LoI as the means of delivering education. Challenges of teacher-pupil verbal interactions were identified with the use of LoI, especially English. Poor understanding and poor English proficiency resulted in slow progress of the syllabus because the teacher had to repeat it multiple times. The teacher presented with a few coping mechanisms: having pupils read the answers from the blackboard, and translating and switching languages. The teacher suggested a slow

and smooth transition from Kiswahili to English when pupils are introduced to English as LoI. Supporting teachers in coping with the challenges was also suggested.

7 Discussion and conclusion

7.1 Discussion

The aim of the study was to explore how teacher-pupil interactions might differ when using Kiswahili compared to using English as LoI. The research questions that guided the study are:

1. How do teachers and pupils verbally interact in Kiswahili-speaking and English-speaking classrooms, respectively?
 - a. What language input is provided by the teacher and how does it affect the immediate output of the pupils, and vice versa?
 - b. What are the verbal interaction patterns?
2. How do teachers experience teacher-pupil verbal interactions using Kiswahili or English as LoI?

The first question concerns the use of LoI and how it affects teacher-pupil verbal interactions. The LoI concerns the language and thus language input and output. According to Tsui (1985) verbal interactions and language inputs are strongly related which means that verbal interactions and the LoI are related. The verbal interactions can be explained by verbal interaction patterns. The discussion considers these patterns as they establish how the teacher-pupil verbal interactions appear in the two classrooms. The verbal interaction patterns appear as the balance between the teacher talk and the pupil talk and between initiate and response (Tsui, 1985). The most prevalent verbal acts constituted the verbal interaction patterns which were sorted into the following themes: repetition routine; switching of LoI; and coordinated chorus. These themes helped explain how English and Kiswahili as LoI affects the teacher-pupil verbal interactions.

The teacher's experiences with how the LoI affects teacher-pupil verbal interactions give context to the observations and help explain why the teacher uses different strategies to cope with the challenges related to the introduction of English as LoI.

7.1.1 Repetition routine

The use of repetition routines is evident in both classrooms. The routine consisted of the teacher directing pupils to repeat the same words and the sentences in English several times in both the 4th and the 5th grade. These routines were also used when speaking Kiswahili in the 4th grade, but not as much when Kiswahili was used in the 5th grade. However, using English as LoI intensified the use of the repetition routines. The classroom verbal interactions were dominated by the teacher's initiation of repetition routines. They consisted mostly of prominent verbal acts such as: factual questions, restating factual questions and direct verbal repeat. Therefore, verbal interaction short and repetitive answers characterized these interactions.

In one case the repetition routine was so extensive as to repeat the same words 18 times in a row. One of the reasons was that the teacher wanted to include a mentally disabled boy that struggled with pronouncing the word in English. Introducing English as LoI necessarily has implications on the learning ability when pupils with special needs already have difficulty speaking their own language. This is a research topic by itself which should be explored.

The extensive use of the repetition routines revealed verbal act that was not included in Tsui's SCS, namely directing pupils to repeat after the teacher as in dictation.

According to the teacher this was because of poor English proficiency among the pupils, which meant that subjects needed to be repeated at least twice and still without the guarantee that the pupils would understand. Therefore, with the introduction of English as the LoI the progress of teaching the syllabus is slow and repetitive.

7.1.2 Coordinated pupils' chorus

Most of pupils' responses were coordinated choruses in both the 4th and the 5th grade, and few responses were given by single pupils. It was not always clear how pupils knew

when to reply the teacher together, but since 80 to 90 percent of pupils' responses were coordinated choruses, one might assume that pupils expect to always respond together. However, the analysis displays three ways pupils were notified about when to reply in chorus: two were direct ways and one was a more indirect way. The most direct one 'nominates' calls on everyone to answer. The less direct one is 'factual question' which is often restated and encourages the chorus by initiating questions that consist of incomplete sentences which the pupils complete in chorus. The more indirect way is by initiating 'direct verbal repeat', which directs pupils to repeat the same words after the teacher. The repetition routines and the coordinated choruses are somewhat connected because most pupils' replies related to the repetition routines in both classrooms are performed as choruses. Also, similar verbal acts that are related to initiating pupils' chorus are found in the repetition routines.

The pupils' chorus represents the response of the whole class to the teacher's questions or other acts that initiate pupils' responses. With 80-90 percent of the responses being coordinated choruses, one can question how the teacher would be able to evaluate the progress of learning for each pupil during the lesson when everyone says "yes" or when everyone at the same time answers correctly to the teacher's question. There might be a risk that some pupils just join in without connecting the answer to the teacher's question. This was not proven, but some of the examples from the observations show that the chorus was not always in harmony and sometimes few pupils joined.

7.1.3 Switching LoI affects teacher-pupil verbal interactions

Since teacher-pupil verbal interactions are closely related to the LoI as it facilitates teacher and pupil talk, it is of interest to investigate how LoI affected the verbal interactions which consist of verbal acts. Therefore, the proportion of the use of verbal acts was examined in order to reveal prominent acts and patterns. The most prominent acts such as factual questions, restating elicit, inform and so on revealed that a large percentage of the verbal interactions in the classroom was conducted in a different LoI than the one that was supposed to be used. It was discovered that the teacher switched LoI during the lessons, especially in the 5th grade.

The LoI for the science subject in the 4th grade is supposed to be taught in Kiswahili. In the 5th grade science it is supposed to be taught in English. However, the teacher's practice of switching LoI between English and Kiswahili interchangeably obscured the dividing line between the two classrooms, the 4th and the 5th grade. Thus, relating 5th grade only to the use of English as LoI and the 4th grade only to the use of Kiswahili would be incorrect when interpreting the findings. Although the proportion of teacher talk and pupil talk was the same in the 5th and the 4th grade, close to 50 percent of the teacher-verbal interactions in the 5th grade were in Kiswahili when the LoI was supposed to be English. The teacher even promoted some use of English in the 4th grade where the LoI is supposed to be Kiswahili.

Code-switching can occur from sentence to sentence. Code-mixing occurs within sentences and the language usually changes because of low proficiency in both languages used (Brock-Utne & Holmarsdottir, 2003). The teacher intentionally switched between the two LoI knowing well the purpose of LoI in the classroom. Just as Qorro (2009), the teacher defined LoI as the means of delivering education to the pupils. The teacher expressed how important LoI is, explaining that the use of a LoI that pupils understand can encourage pupil participation in the class. According to the teacher, about 50 percent of the pupils did not understand what was being said when English was used as LoI. It was also observed that pupils struggled with pronouncing English words. To cope with poor English proficiency the teacher adopted strategies that affected the teacher-pupil verbal interactions, such as code-switching and code-mixing.

In the 5th grade the teacher intentionally left the key words and definitions on the blackboard for pupils to read when she asked questions to evaluate the pupils' understanding of the topic. The pupils took advantage of this and read the correct answers from the blackboard. One could argue that this would stage the verbal interaction between them the way the teacher wanted. However, the teacher perceived this as a solution when the pupils otherwise have difficulties understanding the language. The teacher usually erases the blackboard in the 4th grade when asking the questions, but did not do so when the 4th grade lesson was observed. The reason might be that she wrote the name of the plants in both English and Kiswahili, including the

English words that she directed the pupils to repeat several times during the lesson. One might argue that the teacher enhanced the use of code-switching in the 4th grade by writing the words that they practiced in English on the board which some pupils could not even read, showing how poor the English proficiency is among some pupils.

According to the teacher pupils are struggling with understanding when English is used as LoI. What seems important for her is that pupils can at least acquire the knowledge about the core elements of the lessons. A large proportion of the lesson in the 5th grade was, therefore, conducted in Kiswahili. When using Kiswahili in the 5th grade, the teacher-pupil verbal interactions consisted of combinations of acts to explain the core ideas of the lesson. For example, the verbal act 'inform' was realized when the teacher explained the topic in-depth and in general when the teacher wanted to impart knowledge. It was observed that Kiswahili was used to explain the core ideas of the topic while English was used to introduce and repeat the words.

The code-switching from Kiswahili to English in the 4th grade was practiced to a lesser extent than in the 5th grade. English in this grade was used mostly to name e.g. plants which concerned the topic. The teacher thought that she had used English for about 50 percent of the time, but according to the observation of the lesson she did so only for about 11 percent of the time. She used some English to prepare the pupils for the 5th grade when English was used as LoI.

Switching to English in the 4th grade as a strategy for coping with the sudden introduction of English as LoI in the 5th grade appears to be self-contradictory when considering the extensive use of Kiswahili in the 5th grade. When almost 50 percent of the classroom talk consists of speaking Kiswahili why bother to put efforts in learning any English in advance? The teacher wants to prepare the pupils by introducing English slowly, and she does this by using English and Kiswahili in both the 4th and the 5th grade. This leads pupils through a smooth transition from using Kiswahili as LoI to using English as LoI

However, there is a risk of pupils missing out on learning properly in the class when English weakens the teacher-pupil interactions because of poor English proficiency, and

thus weakens the teacher's ability to have meaningful interactions that can lead to delivering the lesson to the pupils.

Since there is much use of code-switching in both classrooms because of poor English proficiency among pupils and the preparation of the pupils for the use of English as LoI in the 5th grade, much effort and a large proportion of teacher-pupil verbal interactions are used to teach and learn English rather than to teach and learn the content of the subject.

7.2 Conclusion

The discussion was divided into the emerged themes to explain how English and Kiswahili as LoI affected the teacher-pupil verbal interactions. The teacher's extensive use of repetition routines dominated the classroom talk and was seen in both 4th and 5th grade using either English or Kiswahili, but they were more intensively used when English was used as LoI. With the use of repetition routines, the teacher-pupil verbal interactions consisted of verbal acts that elicited short and repetitive answers from the pupils. The research discovered that the repetition routine was used on a mentally disabled boy because he struggled with the pronunciation. When there is an already low proficiency among the pupils, children with special needs might struggle even more when LoI is English.

Most of pupils' responses were coordinated choruses. The choruses were performed most of the times as responses during the repetition routines. It might be difficult to evaluate the learning progress for each pupil when the choruses represent the response of a whole class and not the individual pupil.

The LoI facilitates teacher and pupil talk, thus it has an effect on teacher-pupil verbal interactions, which consists of different verbal acts. The most prominent acts revealed that most verbal interactions were conducted by a different LoI than the one that was supposed to be used. The teacher extensively code-switched, especially a lot in the 5th grade. It was almost difficult to distinguish which LoI was supposed to be used in the two grades. Although, the proportion of pupil and teacher talk, teacher talk being three

times more, were the same in both 4th and 5th grade, Kiswahili was used half of the time in the 5th grade. English was used in the 4th grade, but just a little compared to the 5th grade. The teacher expressed that pupils struggled with understanding and speaking English, so she code-switched to cope with this challenge. It was also observed that some pupils were not even able to read English though she left the answer on the blackboard. The verbal acts revealed, when explaining core ideas, the teacher used Kiswahili and the use of English was related to repetition routines. The teacher justified the use of Kiswahili in the 5th grade by saying it was more important for the teacher that pupils learned at least the core ideas and ensuring a smooth and slow transition to the new LoI. Code-switching was also used to prepare the pupils for the use of English as LoI, but the use of Kiswahili is so extensive that it appears to be self-contradictory. A large proportion of the teacher-pupil verbal interactions are based on teaching and learning English rather than learning the content of the subject.

8 Conclusion

This study has explored how teacher-pupil interactions might differ in a classroom with Kiswahili as LoI compared to a classroom with English as LoI, more specifically the science lesson in the 4th grade compared to the science lesson in the 5th grade. The aim was to identify possible effects the introduction of English as LoI in the 5th grade primary school has on the teacher-pupil verbal interactions. The research has come to the conclusion that the language policy that introduced English as LoI from the 5th grade in 2015 affects teacher-pupil verbal interactions.

The effects of introducing English as LoI in the 5th grade are: the extensive use of repetition routines, coordinated pupil's choruses and code-switching. The study explains that the LoI facilitates teacher-pupil talk, thus it has an effect on teacher-pupil verbal interactions, which consists of different verbal acts. The acts revealed that the most dominant practice in the classrooms was the teacher's use of repetition routines, which elicited short and repetitive answers from the pupils. This practice was more intensively used when English was used as LoI. Most coordinated pupil's choruses were performed when the repetition routine was used.

The verbal acts revealed that the two grades had the same proportion of teacher and pupil talk, but in the significant difference was that in the 5th grade Kiswahili was spoken 50% of the time. It was revealed that pupils struggled understanding and speaking English, which lead to the extensive use of the strategy code-switching, especially in the 5th grade. The acts also revealed that when explaining core ideas, the teacher used Kiswahili and the use of English was related to repetition routines. The teacher adopted code-switching in order to make sure pupils would at least understand core ideas and be prepared for the introduction of English as LoI. It was suggested to ensure a smooth and slow transition to the new LoI. However, the use of Kiswahili is so intensive in the classroom, where English is supposed to be LoI, that it appears self-contradictory when it is argued that it prepares pupils.

A large proportion of teacher-pupil verbal interactions are based on teaching and learning English rather than teaching and learning the content of the subject. One can question the quality of the learning when it seems that the language of learning is not familiar to the pupils. Pupils should understand what is being taught in order to ensure appropriate teacher-pupil interactions.

8.1.1 Recommendations

Based on the findings and the conclusion this study recommends that the government of Zanzibar, more specifically MoEVT, invests efforts in seeking solutions on how to establish a smooth transition for pupils, from using Kiswahili as LoI to using English as LoI in public primary schools. There should be other solutions than just teaching English as subject before using English as LoI.

It is recommended that teachers audio-record a few lessons and use a structural observation scheme, such as the one that was used in this study, to learn more about how they use the language to establish teacher-pupil interactions.

8.1.2 Suggestions for further studies

It is suggested that a similar study on how English as LoI affects teacher-pupil interactions is conducted in Zanzibar in order to test the transferability of the findings, thus strengthening the discussion on how the change of LoI in primary schools in Zanzibar affects learning.

Research on how the use of English as LoI affects pupils with disabilities should also be conducted.

It is suggested that further comprehensive studies should be conducted on teacher-pupil verbal interactions in African classrooms so that analytical tools, such as observations schemes of teacher-pupil verbal interactions can be made in an African context and used for research in Africa.

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Appendices

Appendix 1 Observation Guide: Tsui's Seventeen-Category System

		Acts	Sub-categorization
Teacher Talk	Initiate	1. Elicit 2. Direct 3. Nominate 4. Inform 5. Recapitulate 6. Frame 7. Starter 8. Check	A. Display Qs a) Factual Q. b) Yes-No Q. c) Reasoning Q. d) Explanation Q. B. Genuine Qs a) Opining Q. b) Information Q. C. Re-stating Elicit
	Respond	9. Evaluate 10. Accept 11. Comment 12. Clue	a) Encouraging/Positive b) Negative
Pupil Talk	Respond	13. Reply 14. Apologize	a) Restricted b) Expanded
	Initiate	15. Request 16. Elicit 17. Interrupt	

(Tsui, 1985, p. 11)

Appendix 2 Description of each category of Tsui's Seventeen-Category System

The Seventeen Categories

I. 'Teacher-Initiate'

Category 1: 'ELICIT'

This category can be further classified into three major types.

A. Display Questions: This is a category of question which requires students to display their knowledge, and to which the teacher already has an answer in mind. Different types of questions will elicit different types of responses. For example, a factual question 'What's that book you're reading?' is likely to elicit a short, restricted response whereas a reasoning question 'Why are you reading that book?' is likely to get an expanded, evaluative one. Therefore finer distinctions based on the type of response elicited are made.

- a) Factual Question: Realized by What-, When-, Where- questions. This type of question asks for information and usually has only one acceptable answer.
- b) Yes-No Question: Realized by subject auxiliary-verb inversion. This type of question usually elicits a brief response of either yes or no.
- c) Reasoning Question: Realized by How- and Why- questions. This type of question requires thinking and perception of the interrelation of facts. The response elicited usually requires more sophisticated language structures.
- d) Explanation Question: Realized by "What is the meaning of _____?" or "Can you explain _____?" This type of question requires pupils to express their understanding of words and phrases, signs and symbols etc.

B. Genuine Questions: This category, as opposed to Display Questions, is a type of question to which the teacher does not have an answer.

The term 'genuine' is used as opposed to 'pseudo-question' (Barnes 1969) to which the teacher already has an answer in mind. It can be a question about the pupils themselves or about their opinion.

- a) Opining Question: Realized by expressions like "What do you think?" or "What is your opinion?" This type of question asks for pupils' opinion and is linguistically demanding because it requires expression of pupils' own feeling and opinion, and not mere parroting.
- b) Information Question: The linguistic realizations of this category are varied. Some examples are, "Did you have breakfast this morning?" or "What did you do during the weekend?"

C. Restating Elicit: This category is realized by either repeating the preceding question or simplifying it. This act serves to ensure that pupils can follow both categories of 'Elicit' and is performed either on the teacher's own accord or when pupils fail to respond to the 'Elicit' e.g., The question, "What two forces are often balanced in a fairy story" restated as "What are the two particular qualities of people?"

Category 2: 'DIRECT'

This category, as opposed to Category 1, elicits non-verbal responses. It can be realized by questions or imperatives. For example "Sit down" or "Turn to page xx".

Category 3: 'NOMINATE'

Realized by pupils' names, or "yes?" or "you". It calls on or gives permission to pupils to give response.

Category 4: 'INFORM'

Realized by statements. It serves to provide information or to impart knowledge.

Category 5: 'RECAPITULATE'

Realized by statements which repeat the information previously expressed. It is often marked by "So" or "Right" at the beginning of the statement. For example, "Right, the stream flowed right under their tent."

Category 6: 'FRAME'

Realized by statements referring to some future acts which will be performed in the course of the lesson. For example, "Today, we are going to learn Chapter 27 'A Wet Night'. Now I'll read the passage once and then ask you some questions." This act structures the lesson so that pupils know where they are going.

Category 7: 'STARTER'

Usually realized by statements, though occasionally it is realized by questions. It usually occurs before an 'Elicit', and its purpose is either to provide information about or direct pupils' attention to the following 'Elicit'. For example, "We wouldn't say 'lo!' What would we say?"

Category 8: 'CHECK'

Realized by a closed class of questions such as "O.K.?", "Finished?" "Ready?" It helps the teacher to know the progress of the lesson and usually occurs when the teacher wants to move from one task or topic to another.

II. 'Teacher-Respond'

Category 9: 'EVALUATE'

This act is vital in classroom interaction because pupils need to know whether they have performed adequately or not. fall intonation. This act serves to confirm that the teacher has heard the response and that it is an appropriate one. It may precede or replace an 'Evaluate' in the feedback from the teacher.

Category 11: 'COMMENT'

Realized by statements and tag questions. The function of this act is to expand, develop or provide additional information to the response given by a pupil. It can also serve to express the teacher's personal opinion of the pupil's response. This act often follows an 'Evaluate'. For example, "Yes, I think he was drowned because later the crocodile reappeared, didn't he?"

Category 12: 'CLUE'

Realized by statements or questions or phrases. This act serves to help pupils to respond to elicitation or comply with directions. It can be performed by providing information or language structures, or allowing pupils to express themselves in L1. For example, "What question do you think the king put to Uba-na-ner? *Isn't stated in the passage, you have to think out the question yourself.*"

III. 'Pupil-Respond'

Category 13: 'REPLY'

It provides a linguistic response to 'Elicit'. It is classified into: a) Restricted Reply; and b) Expanded Reply. The former is often realized by either one word or a short phrase. For example, T: "Where was she? Yes?" P: "*on the boat*". The latter expresses judgment, evaluation and the like. It is realized by statements. For example, T: "Is there a clue in the passage that tells you it is a bird?" P: "*The passage says that her skirt is made of the feather of cormorant.*"

Category 14: 'APOLOGIZE'

Realized by a closed class of statements or phrases such as "I'm sorry but _____" or "Sorry, I don't know the answer." This act is performed when a pupil does not know how to answer, fails to understand the question or to comply with the teacher's directions.

IV. 'Pupil-Initiate'

Category 15: 'REQUEST'

Realized by the same class of items as category 2. Its function is to ask for permission to perform a non-verbal action. For example, "Sir, may I turn off the fan?"

Category 16: 'ELICIT'

It has the same linguistic realization as category 1. As distinguished from category 16 which asks for permission, this act asks for verbal response from the teacher or fellow pupils. This is employed when pupils want to raise questions, clarify information or ask for explanation.

Category 17: 'INTERRUPT'

Realized by phrases such as "Excuse me _____" or "Can I just interrupt?" This act is similar to category 17 in that it also serves to raise questions and ask for clarification except that it stops the ongoing discourse.

(Tsui, 1985, p. 12-16)

Appendix 3 Interview Guide for Teachers

A - Background information

School:

Sex:

Age:

Years as teacher:

Academic qualifications:

Professional qualifications: Do you have any other training after you finished your education?

Teaches:

B - Language background

1. What languages do you know?

-Mother tongue?

2. Which language do you know best and which do you know least?

3. How often do you use English in comparison to other languages you know?

a) Often – Quite often – Seldom

b) What language/s do you use at home? Give explanations (The why)

c) What language/s do you use at school? Give details.

C – Experience of teacher-pupil interactions with Kiswahili and English as LoI

4. The new curriculum has changed, introducing English as LoI in math and science.

a) What do you think about this change?

b) How does this change affect you when you teach?

c) How was it before the introduction of English as LoI when you taught in Kiswahili?

5. What do you think are the characteristics of a good communication between a teacher and a student during a lecture?

(Explain communication as the talk between teacher and student)

Characteristics:

-Explaining ideas - Teacher/students

-Asking questions - Teacher/students

-When replying to questions – Teacher/students

-Checking on how much students understand

6. What role do you think language of instruction plays in the communication between teacher and students?

-The role of Kiswahili

-The role of English

7. In your opinion, how can using Kiswahili help a teacher communicate with students during a lecture.

a) What about using English?

8. When you are teaching in English and you want the children to sit quiet, take up their note-books etc. what language do you use? English or Kiswahili?

9. When you think about how you verbally interact with your pupils, what are the strengths and weaknesses of using Kiswahili as LoI?

10. When you think about how you verbally interact with your pupils, what are the strengths and weaknesses of using English as LoI?

11. Use relevant questions that emerged during or after an observation of the teacher's class.

12. Do you have anything to add to the experience of how to interact with students in Kiswahili/English?

Appendix 4 Confidentiality agreement for translators

Data processor agreement

in accordance with Section 13, cf. Section 15 of the Personal Data Act and Chapter 2 of the
Personal Data Regulations

by and between

controller

and

processor

1. Intention of the agreement

The intention of the agreement is to regulate rights and obligations pursuant to the Act of 14 April 2000 No. 31 relating to the processing of personal data (the Personal Data Act) and the Regulations of 15 December 2000 No. 1265 (the Personal Data Regulations). The agreement shall ensure that personal information relating to the data subjects is not used unlawfully or comes into the hands of a third party.

The agreement concerns the processor's use of personal data on behalf of the controller, including collection, recording, alignment, storage and disclosure or a combination of such uses.

2. Purpose

The processor may only process the data in accordance with the purpose defined by the controller. The purpose of the processing of personal data is to translate audio recordings or written texts in Kiswahili from Kiswahili to English.

The personal data that will be processed are audio recordings of lectures in classrooms in public primary schools and, if needed, audio recordings of interviews of teachers. The recordings will be encrypted and transferred via the Internet to the data processor. The processor will receive the password for opening the encrypted audio files on her/his cell phone or email. The processor will translate and transcribe the recordings into English on documents on the processor's personal computer. Any recordings and processing data will be stored safely and encrypted, using AES-256 encryption, on a password protected computer.

The documents with the transcriptions must be encrypted before being transferred to the data controller, using AES-256 encryption. The password for opening the encrypted documents will be sent to the controller on his cell phone or via email. The encryption password must not be sent via the same Internet services as the audio recordings or the documents.

When the controller is satisfied with a transcription the processor must delete the related audio recording and transcription document. Any personal data handled by the processor and stored as backup on another device than her/his computer must be encrypted as well, using AES-256 encryption.

3. The processor's obligations

When processing personal data on behalf of the controller, the processor shall follow the routines and instructions stipulated by the controller at any given time.

The processor is obliged to give the controller access to his written technical and organizational security measures and to provide assistance so that the controller can fulfil his responsibilities pursuant to the Act and the Regulations.

Unless otherwise agreed or pursuant to statutory regulations, the controller is entitled to access all personal data being processed on behalf of the controller and the systems used for this purpose. The processor shall provide the necessary assistance for this.

The processor must observe professional secrecy in regard to the documentation and personal data to which he has access in accordance with this agreement. This provision also applies after the agreement has been discontinued.

4. Use of a subcontractor

If the processor uses a subcontractor or others not normally employed by the processor, this shall be agreed in writing with the controller prior to starting the processing of personal data.

Agreement with subcontractor

Such an agreement should be entered into as an amendment to this agreement.

Anyone who performs assignments on behalf of the processor which include further processing of the relevant personal data shall be familiar with the processor's contractual and legal obligations and fulfil the requirements thereto.

5. Security

The processor shall fulfil the requirements for security measures stipulated in the Personal Data Act and the Personal Data Regulations, in particular Sections 13 – 15 of the Personal Data Act and Regulations thereto. The documentation shall be available upon the controller's request.

The processor shall report to the controller all discrepancies according to Section 2-6. The controller is responsible for reporting the discrepancy to the Data Inspectorate.

6. Security audit

The implementation of regular security audits for systems etc. covered by this agreement shall be agreed by the controller and processor.

Audit

The audit may include a review of routines, random checks, more extensive site inspections and other suitable control measures.

7. Duration of the agreement

The agreement is valid until: October 11, 2016

In the event of breach of this agreement or the Personal Data Act, the controller can instruct the processor to stop further handling of the information with immediate effect.

The agreement can be terminated by both parties with a mutual period of notice of 48 hours d, cf. Clause 8 of this agreement.

8. Termination

Upon termination of this agreement, the processor is obliged delete all personal data received on behalf of the controller and covered under this agreement.

The processor shall delete or destroy in a secure and definite/irreversible manner all documents, data, diskettes, CDs, etc. that contain information covered under this agreement. This also applies to any back-up copies.

The processor shall document in writing that deletion or destruction has taken place in accordance with the agreement within a reasonable period of time after termination of the agreement.

9. Notifications

Notifications under this agreement shall be submitted in writing to: Michael Forbes (michaelwforbes@gmail.com).

10. Choice of law and legal venue

The agreement is subject to Norwegian jurisdiction and the parties agree on Moss District Court as the legal venue. This also applies after termination of the agreement.

This agreement has been drawn up in 2 – two copies, of which the parties retain one copy each.

Place and date

Controller

.....

(signature)

Processor

.....

(signature)

Appendix 5 Letter of consent for teachers

Request for participation in research project

A Study of the Language of instruction and teacher-learner interactions in Standard 4 and 5 in public schools in Zanzibar

Background and Purpose

The researcher who is pursuing his Masters of Philosophy programme in Comparative and International Education at the University of Oslo, Norway, is currently working on his thesis in collaboration with the The Transformation, Language, Education and Development (TRANSLED) project. The topic of the thesis is: “Language of Instruction and Teacher-learner Interactions in Standard 4 and 5 in Public Schools in Zanzibar: A Comparative Study of Kiswahili-speaking and English-speaking classrooms”. The research aims at observing and understanding how teacher-learner interactions might differ in classrooms using Kiswahili as the language of instruction compared to those who use English. The research also aims to increase the scope of research on the language of instruction in education, especially how it plays a role in the interactions between the teacher and the learner in primary school. Thereafter, informing policy-makers in Zanzibar about possible effects the new language of instruction policy might have on classroom interactions.

The TRANSLED project assisted in selecting this school. The criteria of selection is: a public primary school with Standard 4 and 5 that teach the subjects math and science. The teachers of the selected subjects should be teaching the subject in both Standard 4 and 5.

What does it mean to participate in the research?

This research involves classroom observations and also includes teachers' experiences through interviews. The researcher will observe teacher-learner verbal interactions during classes and ask teachers about their experience of teacher-learner interactions in relation to using Kiswahili and English as languages of instruction. The manners in

which data will be recorded are: Notes and audio recordings, but only if permitted by the participants (Tick off the box below if permitted).

What will happen to the information about you?

All personal data will be treated confidentially. Persons who will have access to personal data or any recordings are the following: The researcher, and if necessary, the researcher's supervisor, and a translator, who will sign a confidentiality agreement. To ensure confidentiality, data and recordings will be securely stored on a password protected computer.

Participants will not be recognized in the publication of the research, unless they want to. Paper notes with personal information about the participant will be destructed after transcribing them into documents on the computer. Audio recordings on recording devices will be deleted immediately after they have been transferred to the computer.

The project is scheduled for completion by May 1, 2016. Personal data and any recordings at that point will be securely stored on the researcher's computer until the end of the year 2016, when it will be deleted. Meanwhile, the researcher will keep the personal data and any recordings in case he has to review the data.

Voluntary participation

It is voluntary to participate in the project, and you can at any time choose to withdraw your consent without stating any reason. If you decide to withdraw, all your personal data will be made anonymous.

If you would like to participate or if you have any questions concerning the research, please contact:

Researcher: Michael Forbes. Telephone number: +47 92411872

Supervisor: Birgit Brock-Utne. Telephone number: +47 92848987

The study has been notified to the Data Protection Official for Research, Norwegian Social Science Data Services.

Consent for participation in the study

Mark the relevant checkboxes below with V (e.g. [V]) if you:

have received information about the research

have agreed to participate in the interview and agree that obtained information can be published/saved after project completion. The information will be made anonymous October 2016.

agree that the researcher can observe the class during the lecture and publish/save the obtained information after project completion. The information will be made anonymous October 2016.

Mark the checkboxes below with V (e.g. [V]) if you agree:

that the interview is audio recorded

that the class during the lecture is audio recorded

Participant's signature, date

Appendix 6 Assistant confidentiality agreement

ASSISTANT CONFIDENTIALITY AGREEMENT UNIVERSITY OF OSLO

THE LANGUAGE OF INSTRUCTION AND TEACHER-LEARNER INTERACTIONS IN STANDARD 4 AND 5 IN SOME PUBLIC SCHOOLS IN ZANZIBAR

I, _____, do hereby agree to maintain full confidentiality when assisting in this research project.

I have been providing the following assistance. I have assisted in searching for schools in accordance to the sample criteria of this research. I have also contacted the headmaster of each school to arrange a visit for the primary researcher to each school. The headmasters were contacted by phone and some schools were visited prior to the arrangement made with the headmasters.

Specifically, I agree to:

1. keep all research information shared with me confidential by not discussing or sharing the information in any form or format (e.g., disks, tapes, transcripts, notes) with anyone other than the primary researcher;
2. hold in strictest confidence the identification of any school and participant revealed during this research.

Printed name of assistant: _____

Address: _____

Telephone number: _____

Signature of assistant and date: _____

Printed name of primary researcher: _____

Appendix 7 Translator confidentiality agreement

TRANSLATOR CONFIDENTIALITY AGREEMENT UNIVERSITY OF OSLO

THE LANGUAGE OF INSTRUCTION AND TEACHER-LEARNER INTERACTIONS IN STANDARD 4 AND 5 IN SOME PUBLIC SCHOOLS IN ZANZIBAR

I, _____, do hereby agree to maintain full confidentiality when serving as a translator for this research project.

I will be performing the following translation services (check all that apply):

Verbally translating information from English into Kiswahili or vice versa

I verify that I possess the qualifications to accurately perform the translations.

Specifically, I agree to:

3. keep all research information shared with me confidential by not discussing or sharing the information in any form or format (e.g., disks, tapes, transcripts) with anyone other than the primary researcher;
4. hold in strictest confidence the identification of any individual revealed during the transcription of recordings, during a live oral interview, or in any other raw data;
5. not make copies of any raw data in any form or format (e.g., disks, tapes, transcripts), unless specifically requested to do so by the primary researcher;
6. destroy all research information in any form or format that is not returnable to the primary researcher (e.g., information stored on my computer hard drive or any backup device) upon completion of the translation tasks.

Provide the following contact information of the translator:

Printed name of translator _____

Address: _____

Telephone number: _____

Signature of translator and date: _____

Printed name of primary researcher: _____

Appendix 8 Research permit allowing data collection in Zanzibar

REVOLUTIONARY GOVERNMENT OF ZANZIBAR

SECRETARY
ZANZIBAR RESEARCH COMMITTEE
P. O Box 239
Tel: 2230806
FAX: 2233788



RESEARCH/FILMING PERMIT (This Permit is only Applicable in Zanzibar for a duration specified)

SECTION

Name:	MICHAEL WILLIAM FORBES
Date and Place of Birth	13.06.88 OSLO NORWAY
Nationality:	NORWAY
Passport Number:	26305685
Date and Place of Issue	03.01.08
Date of arrival in Zanzibar	08.11.15
Duration of stay:	29 DAYS
Research Titles:	"LANGUAGE IN EDUCATION IS THE PROJECT'S CORE AREA".
Full address of Sponsor:	SEE SECTION A 1.6



This is to endorse that I have received and duly considered applicant's request I am satisfied with the descriptions outlined above.

Name of the authorizing officer: MOHAMMED KASSIM

Signature and seal:

Institution: Office of Chief Government Statistician
Address: P. O Box 2321
Zanzibar.
Date: 11/10/2015



Appendix 9 Research permit allowing access to primary schools



**SERIKALI YA MAPINDUZI YA ZANZIBAR
WIZARA YA ELIMU NA MAFUNZO YA AMALI**

S.L.P 394
ZANZIBAR-TANZANIA
Barua Pepe:edu@zanzinet.com

Tel: +255-24-2232728
Fax: +255-24-2233306

Kumb. Nam: P33/18/1/VOL.1/141

13 Novemba 2015

Mwalimu Mkuu,
Skuli ya Msingi [REDACTED]
Wilaya ya [REDACTED], Unguja.

KUH: KUFANYA UTAFITI ND. MICHAEL WILLIAM FORBRES

Tafadhali uhusika na mada iliyopo hapo juu.

Mtajwa hapo juu ni mtafiti kutoka Norway ambae kwa sasa anahitaji kufanya utafiti katika mada inayohusiana na **“Language in Education in the Project’s Core Area”**. Nd. Michael amekamilisha taratibu zote za ruhusa ya kufanya utafiti na ruhusa yake imeanza tarehe 10/11/2015 na itamalizika tarehe 15/01/2016. Skuli yako ni moja katika skuli zitakazoshirikishwa katika utafiti wake.

Hivyo, unaombwa umpokee na umpe kila aina ya ushirikiano unaohitajika ili aweze kufanikisha utafiti wake.

Tunategemea kupata mashirikiano yako.

Ahsante,

Dkt. Massoud M. Salim
K.n.y: Katibu Mkuu,
Wizara ya Elimu na Mafunzo ya Amali,
Zanzibar.

✓ Nakla: Nd. Michael William Forbres

Kwa mawasiliano ya moja kwa moja:
Waziri 2238205, Katibu Mkuu 2238210, Naibu Katibu Mkuu 2234356.

Appendix 10 Letter of support for conducting field work

UiO • Department of Education
University of Oslo

Principal Secretary
Second Vice President Office
Zanzibar
Tanzania

Date: 27.08.2015
Your ref.:
Our ref.: Camilla.bakke@iped.uio.no

Letter of Support for conducting field work

I hereby confirm that **Michael William Forbes**, born 13th of June 1988, is a full time student in the Master of Philosophy in Comparative and International Education programme at the Department of Education at the University of Oslo.

In the second year our students are required to write a Master Thesis of 80 to 120 pages. The fieldwork may incorporate interviews with educational practitioners and decision-makers and documentary analysis. The type of data gathered should of course be discussed with the relevant authorities. It is our hope that the work produced by this student will not only benefit him in his academic career but also be of use in the future

Mr. Forbes is planning to do his fieldwork in some primary schools in Zanzibar from 11th of October until 6th of December 2015. His research topic is Language of instruction and teacher-learner interactions in Standard 4 and 5. The work of the master thesis is connected to the TRANSLED project, with Professor Birgit Brock-Utne as supervisor.

We kindly ask you to give him all possible assistance during his fieldwork.

Best regards,



Camilla Bakke
Senior Executive Officer
Department of Education



Department of Education
Postal addr.: PO Box 1092, Blindern, 0317
Oslo
Visiting addr.: Sem Sælands vei 7 Helga
Engshus, 5. etasje

Phone: (+47) 22 84 44 75
Telefax: (+47) 22 85 42 50
postmottak@uv.uio.no
www.uv.uio.no
Org. no.: 971 035 854

Appendix 11 Guidelines for translators for transcription and translation work

Please take your time and read the instructions below.

The recordings are from lectures from science and math classes. In the class lectures it is very important that everything is translated word by word and expressions (such as "eh", "mhm", "ehe" etc). You need to include even words/sentences being said twice or more. My thesis is about the nature of teacher-student verbal interaction. That is why the classroom observations (the recordings of the lectures) need to be very detailed. All the files with the number 4 in the name means Standard 4, primary. Standard 4 will only have Kiswahili-speaking lectures. Number 5 or 6 means Standard 5 or 6. Here they speak English with some code-switching.

-If English words are used in the Kiswahili-speaking class you need to note this in the transcription within parenthesis.

These are the codes you need to use when transcribing:

P = one pupil

Pg = Pupil girl

Pb = Pupil boy

PPs = more than one pupil. You can use this even when the chorus is disharmonically.

T = Teacher

T and PPs = Teacher and pupils in a chorus. You can use this even when the chorus is disharmonically. E.g. often, the teacher says starts saying a word and the pupils follows just right behind the teacher

... = used when there is silence that lasts less than 5 seconds

...(XX sec) = is used when the silence is 5 seconds or more. E.g. ...(6 sec). When there is silence 5 seconds or more then you press "Enter" and start over again. E.g:

T: Today we will look at, eh.

...(7 sec)

T: Look at decimals.

Tr = Translator

R = Researcher

EXAMPLE

Please look at the example of this part of a transcription. (Don't mind the time tags in this example). This is how it should look like:

T: For example...tahe, two, three...over five [He writes $\frac{3}{5}$]...Three...

T and PPs: over five. ($\frac{1}{2}$ answer with a low voice).

T: Let us divide this this number...So, as to see...[00:15:38.697]-[00:15:42.627]

...(6 sec)

T: Three...five....It's not good example [He walks to his desk]...It's not good example

...(7 sec). [The teacher looks through some pages in his book].

T: One over nine...One over three. (He talks to himself).

...(5 sec)

T: One over three...We say one over three [He writes $\frac{1}{3}$ on the board]...Eh? (Ok?)...A good example is...one over three...Mm?...One here...and there is?...Three...Eh? (Ok?)...How many groups of...three in number one...Result is zero, eh? (Ok?)

PPs: Mhm. ($\frac{2}{3}$ answer with a low voice).

**Appendix 12
Translators.**

Certificate of the translation work of Can



CAN TRANSLATORS

Translation | Transcription | Proof Reading

Moi Avenue, Sonalux House, 7th Floor
P.O. BOX 35148, 00100
Nairobi-KENYA
Tel: +254 722 304178

19/1/2017

**Re: English-Swahili translation and transcription of school research data collected
in Tanzania by Michael Forbes**

This is to certify that the translation of the cited documents above is a true reflection of the original English audio and text files and that CAN TRANSLATORS, a registered language services agency in Kenya is qualified to transcribe and translate the afore said documents and is recognized by the Kenyan government as one of the best translation firms.

Alfred Mtawali,

CEO-CAN TRANSLATORS