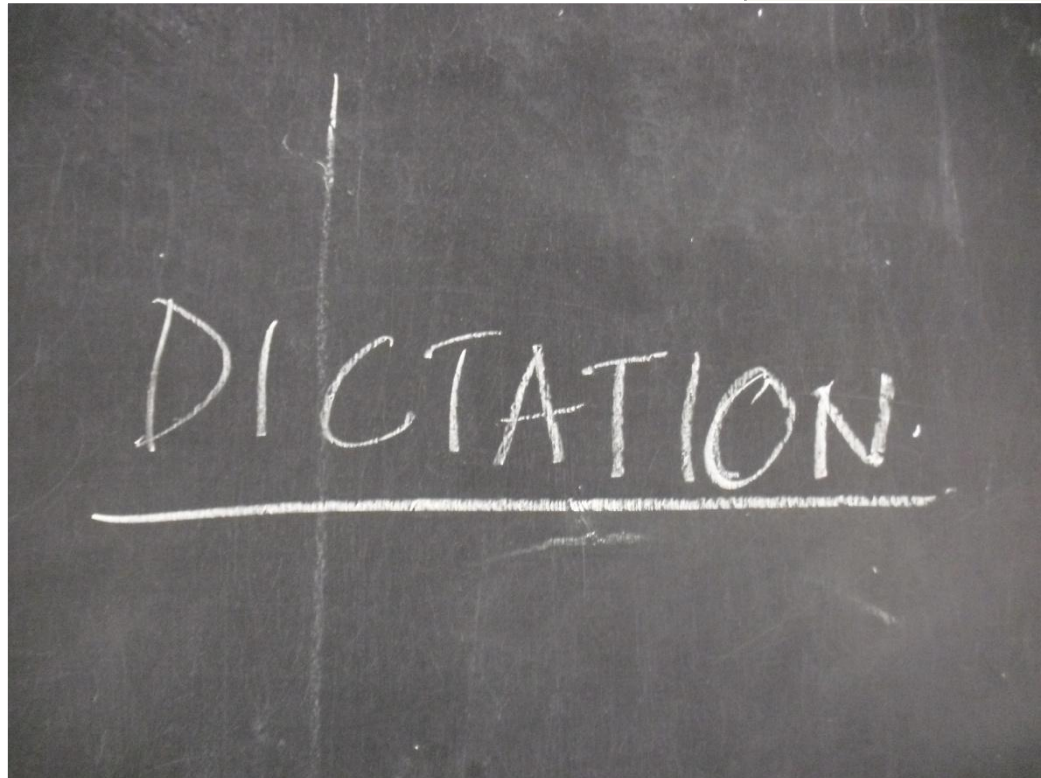# From Ideal to Realities

A curriculum inquiry of the implementation of the

Geography syllabus in secondary schools in Tanzania

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The picture on the cover is from the research's fieldwork. Photo: Øyvind Kormeset Mellingen

Abstract

This study investigates how the Tanzanian geography syllabus is implemented and used in a secondary school. In order to understand how much of the syllabus is recognizable in the actual teacher's practice, John I. Goodlad's substantive domains are applied on the data material. The substantive domains are different levels of curricula emerging through the implementation process and this thesis emphasize on three of them. It investigates the differences between the formal curriculum (the official written syllabus), and the perceived curricula (the teachers' interpretations of the syllabus), and the operational curricula (the teachers' actual practice). The study is based on material originating from a fieldwork in Tanzania in the fall of 2014, including participant observations, interviews and content analysis of the syllabus.

The findings reveal that the ideal of the national syllabus is hard to recognize in the realities of Tanzanian classrooms. During the implementation process large gaps occur between the substantive domains. National exams are one of the key gap generators. The operational curricula involves around passing these exams, which emphasize different content and cognitive processes than the national syllabus. Lack of resources, the teacher training and an overambitious syllabus is other contributors to these gaps, resulting in a curriculum that goes from an ideal to very different realities.

Key words: Tanzania, curriculum, syllabus, geography, teacher practice

Abstrakt

Denne studien undersøker korleis den tanzanianske læreplanen i geografi blir implementert og brukt i ein secondary school. Ved å nytte John I. Goodlad's læreplannivå, kan ein analysere kor mykje av læreplanen som blir implementert i den faktiske undervisninga. Denne oppgåva vil undersøke skilnadane mellom den formelle læreplanen (den skriftlege og offisielle læreplanen) og den oppfatta læreplanen (lærarane si tolking) og den operasjonelle læreplanen (lærarane si faktiske undervisning). Studien er basert på materiale frå eit feltarbeid i Tanzania hausten 2014 og omfattar deltakande observasjon, intervju og innhaldsanalyse av læreplanen.

Mine funn avslører at idealet i den nasjonale formelle læreplanen er vanskeleg å kjenne at i realitetane i tanzanianske klasserom. Gjennom implementeringsprosessen oppstår det store gap mellom dei ulike læreplannivåa. Nasjonale eksamenar er ein av dei største årsakene til den store avstanden. Den operasjonelle læreplanen fokuserer på å få elevane til å bestå eksamen. Eksamen vektlegg eit anna innhald og kognitive prosessar enn den formelle læreplanen. Mangel på ressursar, lærarutdanning og ein overambisiøs læreplan er andre faktorar til disse gapa, noko som fører til ein læreplan som går frå eit ideal til veldig forskjelleie realitetar.

Nøkkelord: Tanzania, læreplan, geografi, læraren sin praksis

Dibaji

Utafiti huu umejikita katika kuchunguza ni kwa namna gani muhtasari wa somo la Jiografia unatekelezwa na kutumiwa katika shule za sekondari nchini Tanzania. Katika kuelewa ni kwa kiasi gani muhtasari huu unatakelezwa na mwalimu kwa vitendo, John I. Goodlad anataja nyanja kubwa ambazo hutumiwa ili kupata taarifa kamili juu ya suala zima la ufundishaji na kujifunza. Nyanja hizo kubwa zinatofautiana katika hatua mbali mbali za utekelezaji wa mtaala husika. Kwa maana hiyo thesis hii inajikita katika kuelezea aina tatu za mitaala. Tafiti hii imejikita katika kuchunguza kwa mapana, tofauti kati ya mtaala halisi (muhtasari rasmi-andikwa), mtaala wa kufikilika (tafsiri ya mwalimu juu ya mtaala) na mtaala endeshaji (utendaji halisi wa mwalimu katika kuutekeleza mtaala). Utafiti huu ni matokeo ya kazi-utafiti iliyofanyika nchini Tanzania mwaka wa 2014, ikihusisha njia za utafiti kama, mshiriki uchunguzi, mahojiano na uchambuzi maudhui ya mtaala.

Matokeo ya utafiti huu yanaonyesha kuwa, ni vigumu kihuhalisia kuutekeleza mhitasari huu nchini Tanzania. Hii inamaanisha kuwa ukosefu wa ushabihiano kati ya kile kilichoandikwa kwenye muhtasari na kile kinachofanyika madarasani katika zoezi zima la ufundishaji na ujifunzaji. Kwa mfano, mitihani ya taifa katika somo hili la Jiografia ni kielelezo tosha cha mismatch. Mitaala endeshaji imejikita zaidi katika kuona mwanafunzi anafaulu mtihani, hapa mwalimu anajikita zaidi kufundisha maudhui yanayohusisha michakato tofauti ya utambuzi tofauti na kile kilichoainishwa kwenye mhitasari. Vilevile ukosefu wa zana za kujifunzia na kufundishia, matayarisho duni ya walimu tarajali pamoja na muhtasari mrefu na usiotekelezeka ni viashiria vingine vya ukosefu wa ushabihiano uliopo kati ya muhtasari na kile kinachotokea madarasani. Hivyo basi, hali hii hupelekea kuwa na mtaala usio kidhi haja na wenye tafsiri tofauti zisizo kuwa halisi.

Maneno makuu: Tanzania, Mtaala, Muhtasari, Jiografia, Mazoezi ya Mwalimu

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I would also like to thank Stine for the continuing support and Leatitia Gabriel Mashaza and William Pastory Majani at Dar es Salaam University College of Education for discussions about my findings and the translating the thesis' abstract to Swahili.

Finally, I will give a special thanks to the regional Norwegian consul under the Norwegian embassy in Dar es Salaam for helping me establish contacts and gaining access to the field.

Asante Sana!

Øyvind Kormeset Mellingen

Bergen, May 15th, 2015

Table of Content

Acronyms

A-level - Advanced level

CIE – Cambridge International Examinations

CSEE – Certificate of Secondary Education Examination

DUCE – Dar es Salaam University College of Education

ESDP – Education Sector Development Program

IGCSE - International General Certificate of Secondary Education

IMF – International Monetary Fund

LCP – Learner-Centered Pedagogy

MOEC – Ministry of Education and Culture

MOEVT – Ministry of Education and Vocational Training

NECTA – National Examination Council of Tanzania

OECD – Organization for Economic Co-operation and Development

O-level - Ordinary level

PISA – Programme for International Students Assessment

SEDP – Secondary Educational Development Plan

TAMONGSCO – Tanzanian Association of Manager and Owners of Non-Governmental Schools and Colleges

TIE – Tanzanian Institute Education

TIMMS – Trends in International Mathematics and Science Study

List of Figures

List of Tables

1.0   Introduction

1.1 Introduction to the Research

This Master's thesis investigates how the Tanzanian governmental geography curriculum is implemented and exercised at the secondary level. The title of this thesis, *From Ideal to Realities - a Curriculum Inquiry of the Implementations of the Geography Syllabus in Secondary Schools in Tanzania*, explains the thesis' intentions and characteristics. The formulation *From ideal to realities* postulates a significant difference between what the students are ideally supposed to learn (the syllabus) and what they in reality actually do learn. With this in mind it is it is important to note that *realities* are in plural, indicating a hypothesis that the syllabus is interpreted and exercised in different ways in different contexts and by different teachers, and consequently constructing different realities. The term *curriculum inquiry* refers to the work of John I. Goodlad. In his book *Curriculum Inquiry – The Study of Curriculum Practice (1979)* he attempts to conceptualize the curriculum field. Goodlad defines a curriculum inquiry as the study of the curriculum practice and its context, assumptions, conducts, problems and outcomes (Goodlad, 1979, p. 17). Goodlad's research is an inspiration and foundation for this study, but there are also other significant curriculum researchers that contribute to my project design. The word *implementation* refers to the usage of the curriculum, as explained in Marsh (2009, p. 92): "The term implementation refers to the actual use of a curriculum/syllabus or what it consists of in practice ". The rest of the title *the geography syllabus in secondary schools in Tanzania* puts the thesis into a national context, and at the same time point out that the research will look upon the geography syllabus and how this is implemented at the secondary level.

1.2 The Objective of the Research.

The governmental syllabus is used by most of the secondary schools in Tanzania (both governmental and non-governmental schools). But *how* does the syllabus affect the teaching and what are the consequences of the implementation? Does the curriculum play an important role in the mind and practice of the teachers? How is the syllabus implemented and executed? To answer these questions, I turn to Goodlad's five substantive domains, which Goodlad used to define levels that produce different curricula. (Goodlad, 1979, p. 58). These domains are named *ideological, formal, perceived, operational* and *experienced curricula*. Ideological curricula emerge from idealistic planning processes and could be influenced by a set of

religious beliefs, myths, prejudices, etc. Formal curricula are those curricula which have been officially approved by a state or local school boards (Goodlad, 1979, p. 61). Perceived curricula are a product of interpretations made by the receivers (teachers) of the formal curricula. However, what teachers perceive as the curriculum and what they actually teach may differ substantially. Operational curricula are the outcome of the day to day, hour after hour events of the classroom and the experiential curricula are what the students actually experience as the curricula (Goodlad, 1979, pp. 62-63).

It follows from Goodlad's five domains that curriculum change according to who interpret it. This raises a lot of interesting question and gives a foundation to my master's thesis. Goodlad states that it would be possible to:

> Compare how each commonplace (e.g. goals) is dealt with at the level of prescribed policy (the formal curriculum) with, for example, how each is operationalized in the classroom (the operational curriculum). Data regarding the ingredients of these several curricula should be of great interest and usefulness to parents, curriculum workers, and educators, as should be the differences uncounted from level to level. (Goodlad, 1979, p. 60)

What Goodlad points out is that a curriculum inquiry and identification of the different curricula can be of great significance to the understanding and continuous development of curriculum. In the thesis I will focus on three of these domains. I will investigate how the formal curricula are converted to perceived and operational curricula. A more detailed explanation of Goodlad will be given in chapter three.

With Goodlad's substantive domains in mind, the objective of the thesis is to investigate and answer this research question:

To what degree is the geography syllabus realized and implemented at the secondary level in Tanzania?

In order to answer this question, I have categorized it into three secondary questions. The first question is a descriptive question:

- *Are there gaps between the formal curriculum (national syllabus) and the teachers' perceived and operational curricula?*

I investigate if there are any gaps between the ideal defined in the formal curricula and the realities constructed in the implementation process. In the possible revealing of these gaps, another question emerges:

- *What creates these gaps?*

If gap occurs in the implementation process, it is important to identify what processes and factors that generate these gaps. By that, it is also important to study the result of the implementation process and investigate the importance of the formal curriculum:

- *What are the effects of the implementation of the formal curriculum on the teaching practice (operational curricula)?*

Initially, I feel there is a need to raise some questions concerning this study.

Why curriculum? When investigating educational practices many researchers tend to emphasize the importance of textbooks (Børhaug & Christophersen, 2012 p. 21). Many teachers rely heavily on the textbook as guidance for their teaching, but in Tanzania this might not be as relevant as in other parts of the world. In 2012, Form I had 61 785 books available in the governmental schools, however the required number of books was 376 952 (MOEVT, 2012). This vast shortage of books in geography alone represents a challenge for the Tanzanian educational system, but my initial judgment is that this also gives an analysis of a textbook a huge validity problem. If 85 percent of all students do not have a textbook, the textbook might not be as important for the educational practice as in other countries? This brings my attention to the syllabus. I investigate the importance of the curriculum in the teaching process.

Why Geography? With 4 periods a week in Form I-IV (one period is 40 minutes), geography has a considerable place in Tanzanian secondary education. The importance of the subject is great in a globalized world. The headmaster of the public school I was researching points out: "You know the world is like small village now".

At the same time geography includes some of the most important topics of the modern world, such as environment. An opinion shared by one of the teachers in my research:

> There are topics like forest, what are the effects of destruction of the forest. How, what are we
> supposed to do in order to conserve the environment. That's why we say that when we teach

students geography it will help them to even perform other activities, for example how to care to the environment, how to engage in agriculture and other. (Mr. Mgeni)

The importance of geography also gives the geography teachers a great responsibility. What kind of knowledge are they providing the students? This is one of the many intriguing questions this thesis will shed light on.

Why Tanzania? When I did my teacher practice in Tanzania in the spring of 2013 I came to realize the immense focus and importance of education in the country. I was intrigued by the many challenges of the educational system. After focusing on primary education for many decades, the attention of the Tanzanian government has shifted towards secondary education. In recent years, secondary education in Tanzania has expanded rapidly. This expansion's main focus has been quantity, and the quality of teaching may have been neglected. This brings out an interesting point in Tanzanian education. What kind of role does the syllabus play in this secondary education initiative?

1.3 The Structure and Content of the Thesis

In chapter 2.0, I present the background needed to comprehend the context of the thesis. I explain the Tanzanian educational system and present relevant research. In chapter 3.0, I discuss different theories and use them to design the thesis' project design. In doing so I create a framework for the rest of the thesis. Chapter 4.0 is the methodology chapter where I depict and explain my methodological choices.

In chapter 5.0, I systematically identify the gaps between the substantive domains using the design presented in chapter 3.0. In the next chapter, I discuss possible causes of these gaps, and at the same time take my findings to a global stage. Chapter 7 concludes the thesis.

2.0   Background

2.1   Introduction to Tanzania

The United republic of Tanzania was established in 1964. The newly independent British protectorate Tanganyika formed a union with the islands of Zanzibar and Julius Nyerere was appointed president in the one-party state. In the decades following the formation of the union, Nyerere developed Tanzania on a populist socialist model, where the state played a prominent role and the private sector was limited. In the center of this strategy was *Ujamaa.* The Ujamaa project was based on the concept of gathering the rural population into villages where they could easier get access to services and organize the agricultural production (Stock, 2004, p.441). The success of Nyerere's populist socialist approach is disputed, but in one area it produced some promising results. With Nyerere's emphasis on the state followed a focus on government funded education. Julius Nyerere, who was a former teacher himself, wanted to give Tanzanians an *education for self-reliance* based on rural and socialist ideology (Nyerere, 1967). He focused on the primary education and the enrolment to primary school skyrocketed from 1.2 million to 3.5 million from 1974 to 1981[1]. Then came the 1980's and with the structural adjustment policies the enrolment sank. This decline opened up for a liberalization of the educational sector and private secondary schools started to flourish. In 1999 there were almost as many private secondary schools as public.[2] The goals for education also changed and the education for self-reliance was in many ways discarded (Wedgewood, 2010, pp. 841-842). The goals for the present educational system are "…promotion of a national unity through the acquisition and appreciation of Tanzania culture, customs and traditions" (Wedgewood, 2010, p. 841). The government sees education as one of the most important factors for poverty reduction (Wedgewood, 2010, p. 842).

2.2   The Present School System in Tanzania

The Tanzanian education system is divided into two years of pre-primary (starting at four or five years old), seven years of primary school, four years of lower secondary school (O-level) and two years of upper secondary (A-level). The primary school is the only mandatory level (Wedgewood, 2010, p. 842). Each year in the secondary course is called a *form,* starting with

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[1] Although the enrolment soared the quality did not and many teachers were recruited straight from primary schools themselves (Wedgewood, 2010, p. 843).
[2] Since then Tanzania has had a enormous growth in secondary education and the majority of secondary schools has been governmental (MOEVT, 2012).

Form I through IV at the O-level and Form V and VI at the A-level. This is illustrated in table 2.1 below.

Table 2.1: The course of the Tanzanian educational system.

Education	Name of class	Student age
Pre-Primary (2 years)	1st. Year	5
	2nd. Year	6
Primary School (7years) Mandatory	Standard 1	7
	Standard 2	8
	Standard 3	9
	Standard 4	10
	Standard 5	11
	Standard 6	12
	Standard 7	13
Lower secondary school (O-level) (4 years)	Form I	14
	Form II	15
	Form III	16
	Form IV	17
Upper Secondary level (A-level) (2years)	Form V	18
	Form VI	19

In O-level, there are two exams. In order to qualify for Form III, the students have to pass a national exam in Form II. This exam has been the source of major controversy. In the late 2000's the decision was made to let all students advance to Form III regardless of their examination results. However, some teachers felt that this contributed to lower pass rates at the Form IV examinations, leading the government to reinstate the Form II national exams in 2012 (Vavrus & Bartlett, 2013, p.94). At the end of Form IV, the students qualify for A-level through the national exam called the CSEE (Certificate of Secondary Education Examinations). The percentages of students passing the CSEE are fluctuating from year to year. In 2010 only 25 % of the candidates passed their geography exams. In 2011 it had risen to 42, 2 % (MOEVT, 2012). In 2012, which is the last statistics made available, the percentage had dropped to 28,2 % (MOEVT, 2013). This is an interesting point in regards to my research. In many ways this can be seen as proof of a gap between the governmental formal syllabus and the outcome of the experiential curriculum (national exams). When such a significant number of students fail to pass the national exam, it indicates that there are gaps

somewhere along the way. I will learn more about the relationship between the syllabus and the national exams in my research.

2.3   The Secondary Education Development Plan

In 2004 the MOEC (Ministry of Education and Culture) launched the SEDP (Secondary Educational Development Plan). The SEDP was five year plan and a part of bigger program called ESDP (Education Sector Development Program) (MOEC, 2004). Leading up to the launching of the plan research revealed a lot of weaknesses in secondary education. These included limited enrolment, limited financing and in-equitable-access (MOEC, 2004, p. vi). However, in this case the most relevant weaknesses that were indentified were:

> (iv) Curriculum is overloaded
>
> (v) Poor supply of textbooks and other teaching and learning materials
>
> (vi) Low teacher qualifications and poor teaching abilities
>
> (MOEC, 2004, p. vi)

In attempting to address these problems the SEDP introduced strategy of improvements. One of their goals was to increase the quality of the secondary school, with the intention of increasing the passing rate on the CSEE exams from under 40% to 70 %. (MOEC, 2004). One of the strategies was to develop a new and streamlined curriculum together with a list of teaching and learning materials by 2006. This curriculum was to address analytic skills and learner-centered pedagogy (LCP). By 2009 SEDP aimed to have adequate qualified teachers for all subjects and a textbook to student ratio of 1:1 (MOEC, 2004, pp. 9-10). A lot of this was not achieved; however a new revised curriculum was in place within short time. The geography syllabus for the O-levels was implemented in school from January 2005. The syllabus was revised again in 2010 when the SEDP expired and the government launched SEDP II (2010-2015). SEDP II evaluated the effects of the first plan and concluded that there still were:

> Poor teaching approaches in the classroom, as it is teacher-centered, with students relying heavily on the teacher and old notes, and classroom time often not being used efficiently and effectively for mental engagement of the students (MOEVT, 2010b, p. vii).

The SEDP II emphasized even stronger that active learning should take place in the schools and also wanted to review the status and impact of the examinations.

2.4   Relevant Research

Secondary education in Tanzania is a field with a lot of research. Especially when it comes to issues such as the fight against HIV and the usage of English as instructional language. When it comes to the relationship between syllabus and the actual practice in Tanzania, the work of Frances Vavrus is an important contribution highly relevant to this thesis. Vavrus (2013) investigated how LCP (Learner-centered pedagogy) was implemented in secondary schools. LCP is a teaching approach that emphasizes the importance of an actively engaged student. It draws on a constructivist idea that knowledge is created through interactions and experiences (Vavrus & Bartlett, 2013, p. 5). She points out that the national policy and syllabi have, to a certain extent, been embracing LCP, while the teachers' practice and teacher education have not. In this research Vavrus have also analyzed how the national exams affect the teacher's practice and found out that the national exams impact on how the teachers teach. I will use Vavrus and her research as a reference throughout this thesis.

The teacher practice is further been investigated by Barrett (2007). Although her research was on primary schools in Tanzania, her findings are relevant for my research. She argues that the dichotomy of learner-centered and teacher-centered teaching in low-income-countries is oversimplified. She points out that under-resourced education cannot be judged by the same criteria as western education. The complexity of Tanzanian teachers practice and values is not fully understood by theories based on western countries alone. This points out the problem of implementing models and theories on another national context, which I will discuss further on in the thesis.

Other researcher, such as Gabriel (2012), have also investigated the implementation of LCP. However, the implementation of the syllabus as a whole is not well researched and a study focusing on geography does not exist.

3.0   Theory and Project Design

In this chapter, I will present my project design and the theory imbedded in it. First, I will discuss the definition of curriculum, then present John I Goodlad's conceptual system and attempt to relate it to a Tanzanian context. After this, I will discuss reactions and responses to Goodlad and also present other important researchers in the field of curriculum. With all this in mind, I will legitimate my choice of using Goodlad before presenting my project design and how I will operationalize it.

3.1   Curriculum – A Definition?

The field of curriculum is an enormous field, making it nearly impossible to define the word curriculum. The moment you define what a curriculum *is* you also define what it *is not*. The definition must be of such a general character that it will accommodate the entire field (Goodlad, 1979, pp. 43-45)." Those who look for the definition of curriculum are like a sincere, but misguided, centaur hunter who even with a fully provisioned safari and a gun kept always ready, nonetheless he will never require the services of a taxidermist" (Marsh, 2009, p. 4).

Goodlad points out that it is difficult to talk about *a* curriculum because of the different ways curriculum is perceived. The curriculum changes dramatically from what was intended to what the learners encounter. Therefore, Goodlad points out that we are talking about *many* curricula. Goodlad also explains the general understanding of the term is that a curriculum is a course offered by an educational institution. This is also the definition provided in the Oxford dictionary: "A course; *spec.* a regular course of study or training, as at a school or university" (Oxford English Dictionary). This definition of the term fails to include the understanding that there are other kinds of curricula that occurs in the process of perceiving and operationalization by e.g. the students or the teachers (Goodlad, 1979, p. 43). However, it is important to point out that no understanding of curriculum is more right than the other, and that different ways of understanding the term will also lead to different discourses.

> We need definitions of course, to carry on productive discourse, but attempts to arrive at a single one have inhibited discourse. If someone wishes to define "curriculum" as a course of studies, this is legitimate-and certainly not bizarre. Let us begin there and see where it takes us. If someone wishes to begin with curriculum as "the experience of students," let us see where this carries us. But let us not begin by throwing out each definition and seeking only to substitute another that merely reflects a

different perspective. We can readily see what a short distance this has taken us. (Goodlad, 1979, pp. 44-45)

Discussing the meaning of the term curriculum is a never ending story and this thesis will not discuss this to any further extent. However, it is important to make clear how I will use the term. Given that this research is founded on the framework of Goodlad's conceptual system it embraces Goodlad and his associates' thoughts about curriculum as something more than the lexical definition. Curriculum is something that is generated at all levels in the teaching process.

It is also essential to initially explain the differences between syllabus and curriculum. Curriculum/curricula will be used to include all the different levels. The syllabus, however, only refers to the formal curriculum.

3.2   Goodlad's Conceptual System

In order to fully comprehend the project design, it is essential to be familiar with John I. Goodlad's work. Over several decades, Goodlad and his associates developed what he calls a conceptualization of the curriculum field (Goodlad, 1979). His conceptual system has been viewed as useful to other researchers in their inquiries and often referenced in Norwegian pedagogical literature (Evenshaug, 1998, p. 175). Goodlad created a linkage between curriculum practice and research (Shen, 1999, p. 41). In the book *Fifty modern thinkers on education – from Piaget to the present (2001),* John I. Goodlad is described as an empirical researcher, an activist and a philosopher thinker, a combination which is uncommon in education (Shen, 2001, p. 123). Shen emphasizes that Goodlad has made a significant mark on American education and also contributed on the international scene (Shen, 2001, p. 126).

Goodlad defines a conceptual system as following:

> By conceptual system I mean a carefully engineered framework designed to identify and reveal relationships among complex, related, interacting phenomena; in effect, to reveal the whole where wholeness might not be thought to exist. Such a system consists of categories abstracted from the existential phenomena. The system is designed to describe and classify categories which can be readily discussed and manipulated at consistent, clearly identifiable, levels of generality and which can be developed from different perspectives. (Goodlad, 1979, p. 19)

Goodlad started his work with the conceptual system in the early 1960's. He meant that a curriculum inquiry was incomplete if it did not see "beyond the pieces to study the

relationships among them and thus to encompass the whole" (Goodlad, 1979, p. 17). In order to do so, he developed a conceptual system of the curriculum field. He gathered a philosopher, a sociologist, an anthropologist and a student of curriculum and began the work of conceptualizing the field (Goodlad, 1979, p. 18). His conceptual system tries to explain in what "level" of the decision making process decisions are made. He wanted to create a framework that could systematically identify and relate the central problems of curriculum development. (Shen, 2001, p. 125). In 1966 he presented this system in *The development of a Conceptual system dealing with problems of curriculum and instruction (1966)* . He later refined the system in *Curriculum Inquiry – The Study of Curriculum Practice (1979).* Figure 3.1 is the final outcome and a representation of his system as a whole.
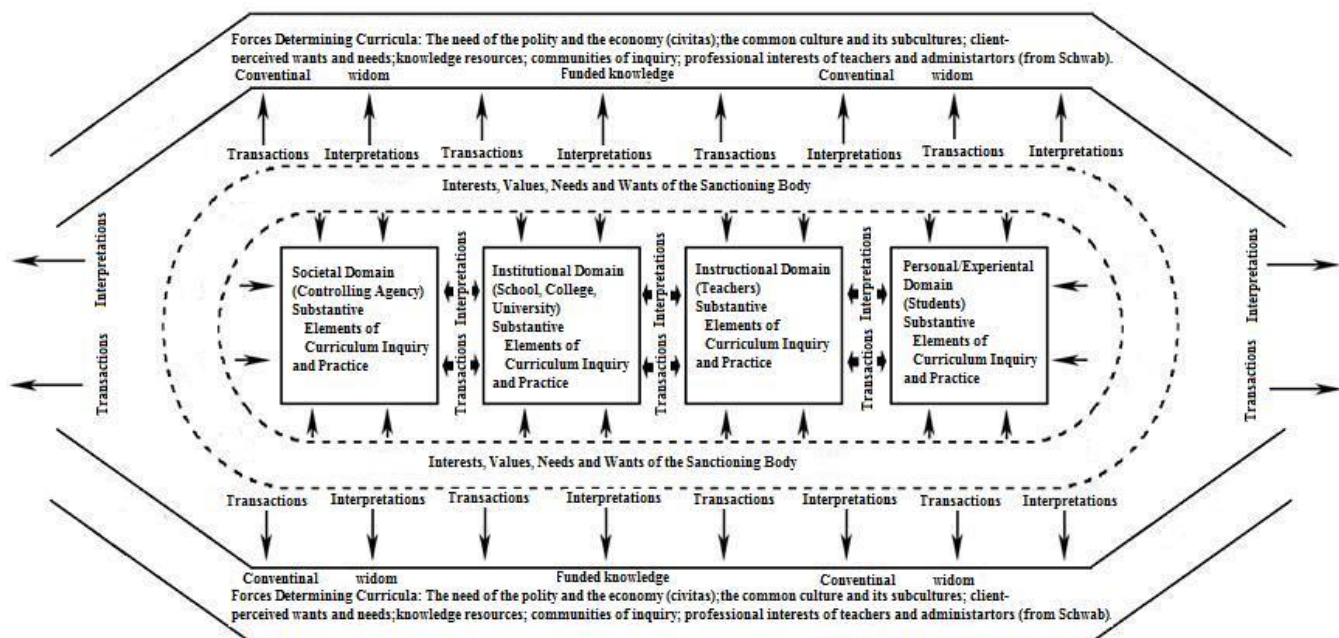
Figure 3.1: The refined conceptual system from *Curriculum Inquiry – The Study of Curriculum Practice (1979, pp. 348-349)*

The four rectangles in the middle of the model represent what Goodlad and his associates called domains of decision making. These domains represent different locales for decisions and are where the previously mentioned substantive domains are produced. First is the *societal domain* which is the level of the decision making process that is the most remote from whom the process is intended to affect – the student (Goodlad, 1979, p. 33). This domain contains legislators at state and federal levels (Goodlad, 1979, p. 33). Goodlad point out that the decisions in the societal domain place restraints on all other domains through educational bills. However, he also explains that most of the decisions made in these far-off

places often have little practical effect on the teaching (Goodlad, 1979, p. 53). To study the societal domain is an important inquiry. Who participates in the decision making and how are decisions made? In my research, I discuss some societal decision-making processes towards the end of the thesis, as I discuss the governmental structure behind the syllabus. However, my main focus is on how the finish product of the societal domain, the syllabus, is implemented through the other domains.

The domain to the right of the societal domain is the *institutional domain* and this domain is made within the school itself. School leaders and boards interpret the more general societal decision into more a concrete curriculum. It is a demanding and difficult exercise and the decision making process often "skips" this level (Goodlad, 1979, p. 35). Decision makers in the societal domain often have the individual teacher as a target (Goodlad, 1979, p. 54).

The *instructional domain* and is where the curriculum coming from the societal domain (maybe passing through the institutional domain) is converted into practice by the teacher. However, as Goodlad (1979, p. 34), Børhaug and Christophersen (2012) and many others emphasize, the teachers tend to use curriculum elements from other sources outside the official syllabus, such as textbooks, when seeking guidelines and directions for their own praxis. This is also an issue I will discuss in my thesis. How do other elements such as textbooks and exams interfere with the syllabus at different levels? Also, Goodlad point out that the instructional domain is the most thoroughly studied and researched domain (Goodlad, 1979, p. 361). The box to the far right is the *personal/experiential* domain and involves the process and space in which students themselves experience the curriculum (Goodlad, 1979, p. 57).

Looking closer on figure 3.1, it is evident that the domains are intertwined and connected by two-way arrows. This illustrates that the domains are constantly in "dialogue" with each other and points out that the domains are not hierarchal arranged.

Framing the rectangles is a dotted "running track" with *Interests, Values, Needs and Wants of the sanctioning body.* This is the surrounding milieu of the conceptual system and Goodlad argues that these values affect all of the domains (Goodlad, 1979, p. 346). Outside these values we find *funded knowledge* and *conventional wisdom* as the sources of which all curriculum development proceeds. In the first edition of the conceptual system Goodlad tried to make a distinction between the two (Goodlad, 1979, p. 351). Funded knowledge referring

to knowledge at a "a higher level of agreement among specialist" (Shen, 1999, p. 40) and conventional wisdom as the "interests, wishes, beliefs and understandings of those who sanction the educational system or consume education" (Shen, 1999, p. 40). However, in the revisited version he does not have this distinction. He points out that "much of what passes as knowledge today is soon to become conventional wisdom or discredited or both" (Goodlad, 1979, p. 351).

3.2.1 The Five Substantive Domains

The decision-making domains produces substances or products that materialize in different ways (Goodlad, 1979, p. 58). Goodlad called these products substantive domains and these are the different curricula that will form the foundation of my research and analysis.

Ideological Curricula

As mentioned earlier, the ideological curricula emerge from idealistic planning processes and can be influenced by a set of religious beliefs, myths, prejudices etc.(Goodlad, 1979, p. 60). By the extension of that, the ideological curricula could be seen as a product of the surrounding milieu of the conceptual system. These ideological curricula are more a set of values and standards on why we need schools and how the school ideally should be and are not necessarily meant for actual implementation. Consequently, elements of the ideological curriculum are rare to be carried trough to the students in it s original form (Goodlad, 1979, p. 60). In my research the ideological curricula will be outside my realm of study. I will concentrate on investigating how the formal curriculum is implemented.

Formal Curricula

This brings us to the formal curricula, the most concrete and tangible of the substantive domains. In Tanzania the formal curriculum is the syllabus. One of the most important considerations with the formal curricula is that it is the only set of curricula that are official and therefore also sanctioned, meaning that these curricula have to be written down (Goodlad, 1979, p. 61). Consequently, the formal curricula are products of the societal domain and it is in the formal curricula that the society's interests are embedded," or at least what some dominant groups in the society wishes the young to acquire" (Goodlad, 1979, p. 61). However, these goals or objectives formulated in the formal curricula are subject to various interpretations and Goodlad emphasizes the importance of investigating how the formal

curricula are implemented: "Whether or not what is intended gets to the students and what they do with it are quite different from goals or objectives and important foci for inquiry" (Goodlad, 1979, p. 61). Given the fact that my research will instigate the implementation of one syllabus, I will use the term formal curriculum in singular form. However, when talking about the other levels of curricula I discuss them in plural, as they represent individual interpretations of each teacher.

Perceived Curricula

Goodlad expresses that "what has been officially approved for instruction and learning is not necessarily what various interested persons and groups perceive in their mind to be the curriculum" (Goodlad, 1979, pp. 61-62). In other words, there may be a difference between the officially approved curriculum and how various members of groups perceive it, resulting in the perceived curricula. Consequently, the perceived curricula are products of the mind (Goodlad, 1979, pp. 61-62). There are many receiver of a curriculum (such as parents), but the most important receivers and interpreters are the teacher, as it is they who implement the syllabus to the students. It is important to look upon what teachers perceived the curriculum to be and what attitudes they have towards it (Goodlad, 1979, p. 62). The perceived curricula could be considered to be products of both the instructional and institutional domain of the decision making process. In my research, the perceived curricula are the interpretations and understanding the teachers have of the syllabus.

Operational Curricula

What teachers perceive as the curriculum and what they actually teach may differ substantially. Goodlad exemplifies this by claiming that teacher tend to be shocked when they see themselves in action on video. He also points out that some studies suggest that teachers early acquire a limited repertoire of pedagogical modes and tend to stay with them (Goodlad, 1979, pp. 62-63). This is some interesting elements, and this Master's thesis will investigate if the operational curricula expressed by the teachers differ from their perceived curricula and ultimately the formal curriculum.

Experiential Curricula

The experiential curricula are what the students actually experience as the curricula. It is the hardest curricula to get dependable data from (Goodlad, 1979, p. 63). The task of investigating students, including interviewing them and get their parents approval, is time consuming and one of the reasons why I will not involve these curricula in my master's thesis. All though these curricula should not be neglected and an inquiry focusing on the experiential curricula in a Tanzanian context is welcomed

3.2.2 The Three Phenomena of Curriculum Inquiry

Goodlad explains that all curriculum inquiry embraces at least three kinds of phenomena. The first is a *substantive* phenomenon that contains the study of the goals, subject matter, materials, etc. Goodlad talks about this phenomenon as the commonplace of any curriculum. He identifies four element of this commonplace; goals, learning experience or activities, organization and evaluation (Goodlad, 1979, p. 355). I will mainly focus on the substantive phenomenon of the Tanzanian geography syllabus and these elements will help me in categorizing and operationalizing my research. The second phenomenon is the *political-social* phenomenon and involves the human processes that lead to some interests being chosen over others (Goodlad, 1979, p. 30-31). Concerning the political-social phenomenon, I will investigate how the teacher choose and emphasize the different curriculum topics. The third phenomenon of curriculum inquiry is the *technical-professional* phenomenon that examines "processes of group or individual engineering, logistics, and evaluation through which curricula are improved, installed, or replaced" (Goodlad, 1979, p.17). These groups or individuals makes up the staff at state or governmental levels and all the way down the local schools (Goodlad, 1979, p. 17).

3.2.3 Reactions and Responses to the Conceptual System

In this context it is most relevant and interesting to look upon Tanzanian responses to Goodlad. This would have given me an idea of how Goodlad's system could be applied to a Tanzanian context. However, I have not found such literature. I will therefore describe Norwegian reactions to Goodlad with much of the same arguments. By looking on reactions from another country I may encounter some of the problems and issues with moving the model out of its original context. The American and Norwegian educational system are not alike and it is interesting to see how Norwegian professionals interpret Goodlad. Professor in

education Britt Ulstrup Engelsen (2003) points out that Goodlad often is used to explain the reality of the Norwegian curriculum, an opinion shared by Imsen (2009) and Solstad (1996). This is an interesting point considering that Goodlad's conceptual system was designed for the American system. However, Engelsen (2003) emphasizes that the conceptual system might be interpreted more hierarchal in the Norwegian literature than what Goodlad intended it to be (Ulstrup Engelsen, 2003, pp. 16-18). This is also an issue for Trude Evenshaug. She explains how the arrows between the domains have contributed to a confusion of what kind of relationship exists between the domains (Evenshaug, 1998, p. 174). Considering this fact, it is important to realize that developing a curriculum is not necessarily a one way street. Teachers and schools may affect the official syllabus, not just the other way around.

Marsh (2009, p. 24) points out that there has been numerous critics, especially in later years, for the concept of developing curriculum models. Gundem (1990) marks that no curriculum studies or models could cover the entire field of curriculum. She points out that that Goodlad's major strength is the way he develops a strategy for an analysis of curriculum and the curriculum field. The greatest weakness of his model, according to Gundem, is that he tried to find an objective procedure to research curriculum practice. This is an almost impossible task (Gundem, 1990, p. 44). This is a significant point that Evenshaug (1998) relates directly to Goodlad's conceptual system and usage in Norwegian pedagogy. Evenshaug explains how Goodlad attempts to describe and map the entire *scope of the curriculum field*. She points out that this is an ambitious project, and by aiming to map the entire field, Goodlad needs to have a wide scope. Evenshaug explains how Goodlad repeatedly let us know how complicated the development of the conceptual system was. Yet, Goodlad's ambition is to map up *everything* that is curriculum and how *everything* is related to each other. Goodlad and his associates do all believe that this is feasible (Evenshaug, 1998). Evenshaug goes on describing how Goodlad's team uses *a detective* as a metaphor for their work. This shows what kind of scientific approach the team has to the task ahead of them. The detective can solve the puzzle and expose the truth with empirical evidence. The truth is something absolute. Evenshaug, however, compares Goodlad and his associates with a team of explorers adventuring to an unknown land. A land that has never previously been mapped and Evenshaug wonders if the map the explorers drew is the only possible map of the land. Did the land they drew exist before they came there? Evenshaug (1998), with reference to Richard Rorty, explains how Goodlad and his associates believe that the truth is discovered

rather than created. Evenshaug challenges Goodlad's philosophical approach to the "the truth" and criticize his scientific methods. It could be interpreted that Evenshaug sees Goodlad's research as an inductive method. I see the critics from Evenshaug as an epistemological issue. Evenshaug and Goodlad have two contradicting perspectives on knowledge. This has been a long debate in science. How is knowledge formed and what criteria are to be fulfilled for it to be seen as true? Aase and Fossaskåret (2007) presents to different and contradicting theories: *the theory of correspondence* and the *theory of coherence*. In the theory of correspondence there is an objective truth or outer reality independent of human knowledge and perception and knowledge is true if it correspond with this objective outer reality (Aase & Fossåskaret, 2007). I see Goodlad and his team of "detectives" as a part of this tradition. Evenshaug, on the other hand, looks upon knowledge as something that is socially constructed. The theory of coherence discards the belief of an outer objective world. We all experience the world through our own senses. The human world consists of different phenomenon and all knowledge is within humans. A theory or analysis is seen as logical if the presumptions it builds upon gives meaning to us, and if there is coherence between presumptions and conclusions diverted from them. Evenshaug questions that if the map Goodlad's team drew could have been different if there were other people involved. It is hard to argue against Evenshaug at this point and by claiming that knowledge is socially created she challenges the reliability of this kind of research. This is an interesting methodical point, especially in qualitative studies where human interactions with humans makes up the majority of the study. In my research, a lot of my data come from interviews and other conversations with teachers. This gives immediate attention to the limitations in reliability of a qualitative study.

All these responses to Goodlad's conceptual system must be taken into considerations when designing my project design. My research will not rely only on Goodlad's five substantive domains. I construct my own project design, with elements from Goodlad and other researchers, and attempt to contextualize this to Tanzanian secondary schools.

3.3   Other Important Researches

3.3.1   Curriculum Models

The fact that reaching a definition of curriculum seems like an impossible task, leads experts to turn to curriculum models which can identify basic considerations and their interrelationships (Marsh, 2009, p. 25). Goodlad was one of many that developed curriculum models in the 1960's and 1970's (Marsh, 2009, p. 26). Other important curriculum models are those of Tyler (1949) and Wiggins and McTighe (1998) (among many others) (Marsh, 2009, p. 25). These models are used in the thesis' analysis.

Tyler's four questions (1949)

Tyler's model is a model of how to construct a curriculum, and by that it differs from Goodlad's study of the curriculum practice. Nevertheless, it does have some relevant elements. Tyler explains the process of building a curriculum by using four simple questions (Marsh, 2009, p. 24). The first question being; what educational purposes should the school seek to attain? By this, Tyler pointed out that planners of educational programs should have a conception of goals and these goals then become the criteria by which materials, content and instructional procedures are chosen and how tests and examinations are prepared (Tyler, 1949, p. 3). This brings him to the next question; how can learning experiences be selected which are likely to be useful in attaining these objectives? Tyler meant that the chosen learning experiences should be relevant and adapted to the students and at the same time varied and well-planned (Tyler, 1949, pp. 63-68). The third question is: How can learning experiences be organized for effective instruction?, meaning that the curriculum planners should organize all these learning experience into units, courses and programs (Tyler, 1949, p. 83). The fourth and final question is; how can the effectiveness of learning experiences be evaluated? With this question, Tyler focus on the evaluation and meant that the main purpose of evaluation was to check if these plans of learning experiences function to guide the teachers in producing the desired outcome for the students (Tyler, 1949, p. 104). This model explains the process of planning a curriculum from its goals or objectives to the examination.

Wiggins and McTighe's backward design (1998)

Wiggins and McTighe's model from 1998 is the first detailed curriculum model published since the 1970's and therefore represents the chronological counterpart to Tyler (1949). It focuses on the element of understanding and that the students should comprehend the ideas and processes behind topics, not only reproducing facts. Wiggins and McTighe's model provides, like Tyler's, a set of design processes and design standards (Marsh, 2009, p. 33). But, this model is designed more as a guide for the teachers to plan lessons. It uses a backward design process, meaning they have reversed the planning sequence starting with identifying the desired result, then finding the right assessments and finally choosing how to teach (Wiggins & McTighe, 1998, p. 9).

In determining goals, standards, and content the teachers could include four criteria (Wiggins & McTighe, 1998). The first criterion is "To what extent does the idea, topic or process represent a "big idea" having enduring value beyond the classroom?" (Wiggins & McTighe, 1998, p. 10). This "enduring" understanding is more than just basic facts and skills, meaning that what the students learn could be applicable to new situations. It focuses on larger concepts, principles and processes (Wiggins & McTighe, 1998, pp. 10-11). The second criterion is "to what extent does the idea, topic or process reside at the heart of the discipline?" (Wiggins & McTighe, 1998, p. 11). This criterion is about making the students involved in the actual discipline or subject. The teachers need to integrate the way professionals within a discipline work into their own teaching. The third criterion is "To what extent does the idea, topic or process require uncoverage?" (Wiggins & McTighe, 1998, p. 11). Wiggins and McTighe mean that teachers should select abstract topics that often harbor misconceptions. These are topics the teacher should uncover by teaching for understanding (Wiggins & McTighe, 1998, p. 11). The final criterion of choosing the content is "To what extent does the idea, topic or process offer potential for engaging students?" (Wiggins & McTighe, 1998, p. 11). This is about making the students encounter topics that provoke and connect to students' interests, which increases the likelihood of students engagement (Wiggins & McTighe, 1998, p. 11). These criteria are interesting because they provide a foundation to a discussion on how the teachers in a Tanzanian context choose their content.

After choosing the desired goal, it is time to determine how it can be evaluated/assessed, meaning that the teachers should think about assessment before planning lessons. Because understanding develops from an ongoing process, Wiggins and McTighe underline the

importance of a continuous assessment instead of a "single moment-in-time test at the end of instruction" (Wiggins & McTighe, 1998, p. 13).

In planning the actual lesson, the teacher needs to decide what knowledge and skills the students need, what activities will give them this knowledge and skills, how would this be taught and what materials will be used (Wiggins & McTighe, 1998, p. 13). What Wiggins and McTighe does not discuss, is the actual execution of the plan. This is where Goodlad has his strength.

3.3.2   Fidelity of Use vs. Adaptation

There has also been a lot of research on how curriculum is implemented in schools. Colin Marsh (2009, p. 94) explains that the terms *fidelity of use" and "adaptation"* is often used to describe the two outer extremes of curriculum implementation. Fidelity of use refers to a practice where the curriculum is spelled out in detail and teachers need to cover certain topics in a specific order and in a certain way. It has been established as a key perspective in the implementation literature and this strict way of organizing the curriculum is often used in the most important, or "core" subjects (Marsh, 2009, pp. 94 - 101). The enactment of the curriculum in the classroom should be corresponding as closely as possible to what is planned in the curriculum. "Why else devote considerable resources, time and energy to planning the best possible curriculum for use in schools if the teachers do not actually use it?" (Marsh, 2009, p. 101). The perspective of fidelity also implies a distrust of the teachers' understanding of the curriculum:

> … Because teachers have a low level of curriculum literacy, the planned curriculum must be highly structured and teachers must be given explicit instructions about how to teach it. Because both the curriculum and instructions to teachers are specified, the fidelity perspective leaves little room for a curriculum to be tailored to any particular or changing circumstances of the specific schools or classrooms in which it is intended or be taught. (Marsh, 2009, p. 101)

Curriculum planners treat teachers as passive recipients of curricula and in the most extreme cases they try to design "teacher-proof" curriculum packages, leading to an alignment of goals, objectives, instructional materials, etc.

The other way of dealing with implementations of curriculum is adaptation. Adaptation means that teachers are to be creative and make their own individual versions of the curriculum (Marsh, 2009, p. 94). This means that the proponents of the adaptation perspective acknowledge that different circumstances apply to different schools and that teachers modify

the curriculum continually (Marsh, 2009, p. 103). Teachers will feel freer, but also be put under more pressure, as they are forced to make individual professional choices.

3.4   Why Goodlad?

So, why use Goodlad in a field with so many contributors? First of all, Goodlad is not the only contributor to my project design. I use Goodlad's five substantive domains together with thoughts of other curriculum experts, such as Tyler (1949) and Wiggins and McTighe (1998). Second of all, the advantages of using Goodlad is that he developed a procedure of researching the curriculum practice (Gundem, 1990, pp. 37-44), and by that also developed a set of concepts for the implementation process of curriculum (Imsen, 2009, p. 194). I identify his five substantive domains as the most important element in this procedure. These domains describes the course from a curriculum idea to the actual curriculum as it appears in the classroom (Imsen, 2009, p. 194). This important element of Goodlad makes him highly relevant for this research. Categorizing curriculum into some kind of levels is not uncommon among curriculum expert. Kelly (2004, p. 6) talks about the difference between the planned (or official curriculum) and the received (or actual) curriculum. He points out: "…these distinctions are important and we would be foolish to go very far in our examination of the curriculum without acknowledge the gaps that must inevitably exist between theory and practice…" (Kelly, 2004, p. 6) The work of Lundgren (1979) is also an example on this kind of level structuring of the curriculum, implying that this element is common to the curriculum discourse.

3.5   The Project Design

With all this in mind I have constructed a project design as a framework of the master's thesis.
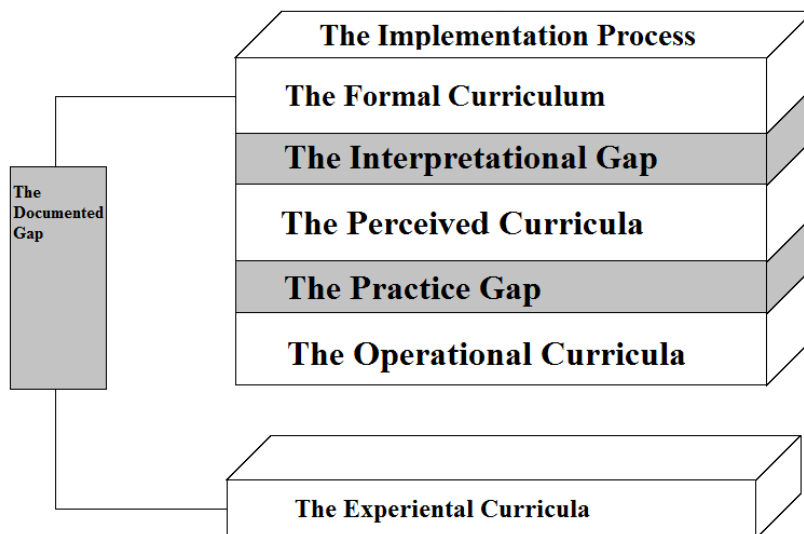
Figure 3.2: The implementation process - The project design constructed with John I. Goodlad's conceptual system and the Tanzanian educational context as a framework.

My model incorporates some of Goodlad's terms. The model is divided into five different levels. The white ones are Goodlad's substantive domains and grey ones are the gaps that my research is aiming to map.

The first domain is the **formal curriculum.** In my case, this is the geography syllabus for Form I-IV and represents the starting point of my study. I investigate how the teachers interpret and comprehend this syllabus, represented by the **perceived curricula** in the model. The teachers' practice is represented in the model as the **operational curricula.** I have also included the **experiential curricula** because it represents an important point. I have previously mentioned that the students in secondary schools in Tanzania are tested by national exams. The results of these tests have been poor and this could be an argument of a **documented gap** between what they are indented to learn (the syllabus) and what they actually do learn (experiential curricula). There are a lot of issues of concluding that low test scores are the same as the students not learning what is intended. For example, the validity of an exam or test to safely indicate students learning experiences is questionable. Goodlad puts it this way: "We recognize that the use of existing achievement test scores places a major limitation on conclusions regarding student outcomes because of class-to-class variations in

administration of such tests" (Goodlad, 1979, p. 70). However, when the majority of the students fail the exams, there is evidence that there are gaps somewhere along the way. This thesis investigates where these gaps are being accumulated. In order to do, so I have constructed hypothetical gaps between the curricula levels in my model. These gaps are not yet documented, but my hypothesis is that they very much exist.

The first hypothetical gap is **the interpretational gap**, indicating that there is a gap between the formal syllabus and the interpretations of the teachers. This raises a lot of interesting questions; how does the teacher interpret the syllabus? How dependable and committed is the teacher of the syllabus? What kind of freedom for interpretations exists?

The next gap is named the **practice gap** and represent that what the teacher wants to teach and what he actually do teach is not necessarily corresponding. This could be because the teacher is not self-conscious enough in his teaching and does not engage in self-diagnosis. Alternatively, it could be a lack of teaching materials or other causes that creates this gap.

Instead of a grey gap, there is an open space between the operational curricula and experiential curricula. This is not because I do not believe there is a gap there; on the contrary I am confident that this gap exists. However, I do believe that this gap is difficult to prove with empirical research within the time frame of my master's thesis. This gap demands a certain attention to the students themselves. As Goodlad explains, this raises questions about the validity: "Dare they trust us to care seriously about their answers? Do we trust their answers?" (Goodlad, 1979, p. 64). Considering these methodological and pragmatic issues, I do not investigate this gap.

3.6   Operationalization of the Gaps (Categories for Analysis)

In order to compare the different substantive domains and identify gaps between them, it is necessary to operationalize the domains with categories. These categories are funded on elements of the substantive phenomenon of Goodlad (1979), such as goals, subject matter and materials. The first two categories, *teaching methods* and *teaching materials,* correspond with categories written in the formal governmental syllabus. The third, *cognitive processes,* is created from relevant theory and the fourth, *content emphasis*, is based on what topics the different domains lay their stress upon.

3.6.1 Teaching Methods

Teaching methods refer to the ways of instruction the teacher uses in the classroom. The different methods have different characters and often involve the students in various degrees, from lecturing methods that does not involve the students at all, to interactive instructional methods like discussions and role play. I investigate what kind of methods the different curricula emphasize. Are there any differences in what methods the formal syllabus emphasizes and what the teachers would like to use? And is there any difference between what the teacher would like to use and what they actually use? If so, why?

3.6.2 Teaching Materials

In the governmental syllabus the required teaching materials for each topic is listed. This gives me an excellent opportunity to investigate if there is any gap between what materials are recommended and what the teachers feel they need (perceived curricula) and what they actually use (operational curricula). If there is a gap, what creates it? and what affects does this have on the implementation of the syllabus?

3.6.3 Cognitive processes

In classifying educational objectives, the work of Benjamin Bloom has been an important contributor. In 1956, Bloom and his colleagues published *The Taxonomy of educational Objectives, The classification of Educational Goals, Handbook 1: Cognitive Domain.* In 2001 Anderson (a previous student of Bloom) and Krathwohl, together with six other authors, revised the fifty years old handbook and incorporated new knowledge into the framework. (Anderson et al., 2001, p xxii). This revised version will be used in the thesis. The taxonomy table, figure 3.3, classifies different cognitive processes or levels that the students are expected to achieve. The six processes are *remember, understand, apply, analyze, evaluate, and create.* This gives me an opportunity to compare the different curricula by examining what kind of processes they emphasize. The list bellow explains the processes and the sub-categories:

THE COGNITIVE PROCESS DIMENSION

CATEGORIES & COGNITIVE PROCESSES	ALTERNATIVE NAMES	DEFINITIONS AND EXAMPLES
1. REMEMBER—Retrieve relevant knowledge from long-term memory		
1.1 RECOGNIZING	Identifying	Locating knowledge in long-term memory that is consistent with presented material (e.g., Recognize the dates of important events in U.S. history)
1.2 RECALLING	Retrieving	Retrieving relevant knowledge from long-term memory (e.g., Recall the dates of important events in U.S. history)
2. UNDERSTAND—Construct meaning from instructional messages, including oral, written, and graphic communication		
2.1 INTERPRETING	Clarifying, paraphrasing, representing, translating	Changing from one form of representation (e.g., numerical) to another (e.g., verbal) (e.g., Paraphrase important speeches and documents)
2.2 EXEMPLIFYING	Illustrating, instantiating	Finding a specific example or illustration of a concept or principle (e.g., Give examples of various artistic painting styles)
2.3 CLASSIFYING	Categorizing, subsuming	Determining that something belongs to a category (e.g., concept or principle) (e.g., Classify observed or described cases of mental disorders)
2.4 SUMMARIZING	Abstracting, generalizing	Abstracting a general theme or major point(s) (e.g., Write a short summary of the events portrayed on a videotape)
2.5 INFERRING	Concluding, extrapolating, interpolating, predicting	Drawing a logical conclusion from presented information (e.g., In learning a foreign language, infer grammatical principles from examples)
2.6 COMPARING	Contrasting, mapping, matching	Detecting correspondences between two ideas, objects, and the like (e.g., Compare historical events to contemporary situations)
2.7 EXPLAINING	Constructing models	Constructing a cause-and-effect model of a system (e.g., Explain the causes of important 18th-century events in France)
3. APPLY—Carry out or use a procedure in a given situation		
3.1 EXECUTING	Carrying out	Applying a procedure to a familiar task (e.g., Divide one whole number by another whole number, both with multiple digits)
3.2 IMPLEMENTING	Using	Applying a procedure to an unfamiliar task (e.g., Use Newton's Second Law in situations in which it is appropriate)

THE COGNITIVE PROCESS DIMENSION (CONTINUED)

CATEGORIES & COGNITIVE PROCESSES	ALTERNATIVE NAMES	DEFINITIONS AND EXAMPLES
4. ANALYZE—Break material into its constituent parts and determine how the parts relate to one another and to an overall structure or purpose		
4.1 DIFFERENTIATING	Discriminating, distinguishing, focusing, selecting	Distinguishing relevant from irrelevant parts or important from unimportant parts of presented material (e.g., Distinguish between relevant and irrelevant numbers in a mathematical word problem)
4.2 ORGANIZING	Finding coherence, intergrating, outlining, parsing, structuring	Determining how elements fit or function within a structure (e.g., Structure evidence in a historical description into evidence for and against a particular historical explanation)
4.3 ATTRIBUTING	Deconstructing	Determine a point of view, bias, values, or intent underlying presented material (e.g., Determine the point of view of the author of an essay in terms of his or her political perspective)
5. EVALUATE—Make judgments based on criteria and standards		
5.1 CHECKING	Coordinating, detecting, monitoring, testing	Detecting inconsistencies or fallacies within a process or product; determining whether a process or product has internal consistency; detecting the effectiveness of a procedure as it is being implemented (e.g., Determine if a scientist's conclusions follow from observed data)
5.2 CRITIQUING	Judging	Detecting inconsistencies between a product and external criteria, determining whether a product has external consistency; detecting the appropriateness of a procedure for a given problem (e.g., Judge which of two methods is the best way to solve a given problem)
6. CREATE—Put elements together to form a coherent or functional whole; reorganize elements into a new pattern or structure		
6.1 GENERATING	Hypothesizing	Coming up with alternative hypotheses based on criteria (e.g., Generate hypotheses to account for an observed phenomenon)
6.2 PLANNING	Designing	Devising a procedure for accomplishing some task (e.g., Plan a research paper on a given historical topic)
6.3 PRODUCING	Constructing	Inventing a product (e.g., Build habitats for a specific purpose)

Figure 3.3: Blooms cognitive processes (Mayer, 2001, pp. 67-68)

These cognitive processes are categorized in levels of complexity, with remembering as the less complex and create as the most complex process. The first process promotes reproduction of the materials and is often done by giving students recognition or recall tasks (Mayer, 2001, p. 66). However, when the objective of the instructions is to promote transfer of knowledge the attention turns to the five next levels. The second process, *understand*, means that the students should construct meaning from instructional messages and make a link between new and prior knowledge (Mayer, 2001, p. 70). Process number three is *apply* and involves that the students should use a procedure to perform exercises or solve problems (Mayer, 2001, p. 77). Process number four is *analyze*. On this level the students are expected to "break materials into constituent parts and determine how the parts relate to one another and to an overall structure or purpose" (Mayer, 2001, p. 79). The next process in the taxonomy is *evaluate*. On this level the students should make judgments based on criteria and standards. The last and sixth process is *create*, meaning that students should be able to make new products putting elements together or reorganize them in a new pattern, which requires

creativity. These different levels allow me to identify what cognitive process the different curricula expect the students to execute.

3.6.4 Content Emphasis

It is also important to analyze what part of the syllabus and which topics are emphasized in the different domains? And more importantly, why do they emphasize the specific topics? Is there a difference in what the syllabus emphasize and what the teacher wants, and do prioritize? If there is a gap on what part of the syllabus the teacher and the syllabus emphasize, what effects will that have?

4.0 Methodology

The selected research design effectively divides my project into three parts, which demands slightly different methodological approaches. The study of the formal curriculum is a content analysis. The study of the perceived curricula comprise of mainly interviews, but also participating observation in combination with analysis of test/exams. The study of the operational curricula is a participating observational study. The methodological choices are shown on figure 4.1.
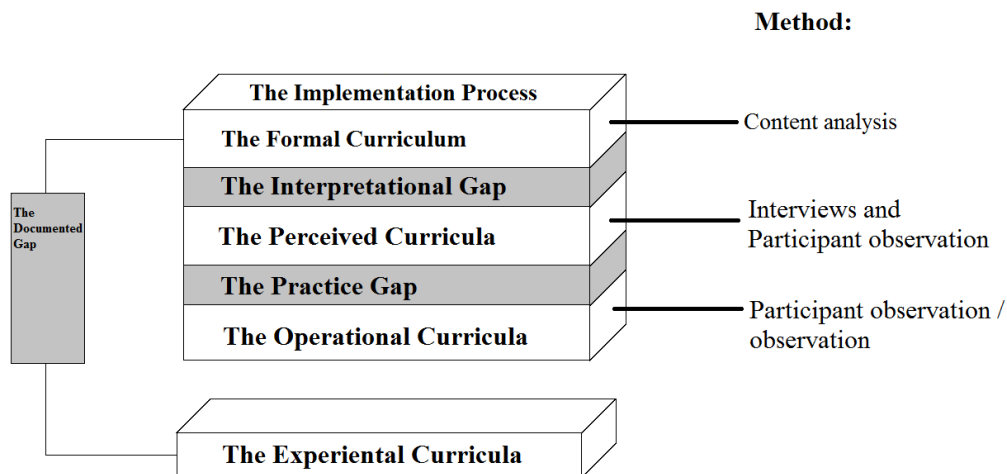
Figure 4.1: The project design with methodological choices.

Qualitative *oriented* methods makes up the foundation of my approach. This term is used by ,among others, Aase and Fossaskåret (2007) to indicate that qualitative and quantitative methods may be difficult to separate. As a consequence they talk about qualitative and quantitative *oriented* methods instead. The methods can complement each other by contributing in different ways to shed light on a phenomenon. My research is mostly a qualitative oriented research. On the other hand, a lot of my initial research at the formal curriculum will be quantitative oriented.

My initial project was a comparison of the implementation of the governmental syllabus at a public school and the implementation of an external syllabus, the Cambridge curriculum, at a private school. In order to do so, I gathered a lot of information. I interviewed nine different people, including four teachers and two headmasters and observed 23 periods. I have also gathered documents, such as exams and tests, and written a detailed field diary.

However, facing the work load and time remaining, I made the choice of focusing on the national syllabus. I made this choice after returning from the fieldwork, meaning that the fieldwork where designed and executed as a study of two schools. I will describe the field work as it was.

Nevertheless, the research on the Cambridge curriculum and the non-governmental school is not rendered useless. I will discuss the Cambridge curriculum in the end of the thesis as an alternative to the national syllabus.

In this chapter, I will discuss my methodological choices. First, I discuss the scientific approach, and the generals of my fieldwork, before explaining about the different methods used. Finally, I discuss some ethical considerations and the quality of the data.

4.1   The hypothetic-deductive approach

My research uses a hypothetic-deductive approach. In the hypothetic-deductive tradition the researcher postulates a set of hypotheses based on prior models of reality. These hypotheses are either confirmed, modified or rejected using empirical data (Holt-Jensen, 2009). I intend to use Goodlad's substantive domains to generate my hypothesis that there are gaps between the different domains. I aim to identify and describe these gaps, but also explain what generates them. Trude Evenshaug criticizes John. I. Goodlad and his conceptual system of being inductive constructed (Evenshaug, 1998 Pp.170-173). Holt Jensen (2009) points out: "The jump from a number of single instances to a general truth" is problematic. Holt Jensen uses the phrase " All swans I have seen are white: all swans are white" (Holt-Jensen, 2009 p. 106). This could be an important factor when the substantive domains are to be transferred into other national contexts.

4.2   Fieldwork

Essential in producing the data[3] needed for my research was the fieldwork. Thaagard (2010 p. 65) explains that fieldwork refers to the phase where the researcher leaves his office and travels to another milieu (field). In order to conduct my research, I stayed six week in Tanzania. I travelled to Tanzania in early September 2014 together with two other master students. We were all conducting research in the same area and partially also in the same schools.

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[3] In Quantitative oriented research the term "collect data" is often used. In Qualitative oriented method the term "produce data" is often more fitting, meaning that data is always is created in a process of interpretation (Aase & Fossåskaret, 2007).

4.2.1 Selection of Schools

As explained earlier, my initial research comprised of two schools, both relatively big schools located in an urban area in Tanzania. One of them was a governmental (public) school and the other one was a non-governmental (private) school. The governmental school used the governmental syllabus and the non-governmental school used the Cambridge Curriculum. I spend about the same amount of time in both schools. The first weeks I focused on the non-governmental school and I got to know the teachers and the classes. Then gradually, I changed my focus towards the governmental school.

These schools were chosen for several reasons. First of all, the intention was to embrace two different dimensions of the education in Tanzania, the governmental and the non-governmental sector. Secondly, I wanted to conduct my fieldwork in an area of Tanzania I was already familiar with. I have previously been in the same part of the country during my teaching practice. And thirdly, the selected schools were both large units within their respective school district. These three criteria were important in the selection process.

4.2.2 The Participants

My fieldwork mostly comprised around four participants. The teachers on the governmental school each had a lot of classes, while the teachers in non-governmental only had one at each level. I call them participants because they were participating in the production of the data material. In addition to the four participant teachers I also had a lot of informants, meaning they gave me a lot of information, but was not part of my day to day fieldwork. This included the two principals of the schools, but also other school leaders and a teacher at DUCE (Dar Es Salaam University College of Education). The four participant teachers were all teachers of geography at the secondary level. The teachers in the non-governmental school were addressed with their first name while the teachers of the governmental school were addressed with their surname. In this research they have been given fictive names.

Mr. Mgeni

He is the geography teacher for Form IV at the governmental school, who specialized in geography at the University of Dodoma. He is also the head of the maintenance at the school and has five years of teaching experience.

Ms. Ngoye

She is the only female participant and the geography teacher for Form III at the governmental school. Her education is specialized in geography and history. She has three years of experience.

Mr. Mathew

The geography teacher for year 11 at the non-governmental school and by far the most educated of the teachers involved in this research. He has a bachelor in education, specializing in geography and economics, and a master in business and administration. He has five years of teaching experience.

Mr. David

The geography teacher for year 10 at the non-governmental school and has a bachelor degree in education, specializing in mathematics and geography. He is from Kenya and has four years of experience.

4.2.3 Gaining Access to the Field – Field Relations

In order to produce the data, I needed to be granted access to the participants. Prior to the fieldwork, I sent an information text to the two schools in question, which explained my research (see appendix 1 and 2). Shortly after arriving in the field I delivered a revised information text (see appendix 3), also including a letter of recommendation from my supervisor. I also met up with the principals where they could ask me about my project.

Being granted access to the field was just the first step. After the teachers and principals had approved my stay at the school, I started the much more difficult task of getting access to the meanings and practice of the teachers. Repstad (2007, p. 44) points out that an official approval to do research does not include the constant informal negotiations with the participants to get as open and honest information as possible. In order to do so the researcher needs to gain the respect and trust from the participants. The buildup of trust is important because without trust the researcher risk to not be included and the observations can be shallow (Fangen, 2010). In an attempt to gain this personal opinion from the participants, I was very determined to give impressions of me as a non-threatening person. I needed a relevant status. Aase and Fossaskåret (2007 p. 24) explain that a role or status is constituted by all the expectations about the rights and duties tied to a person in a special situation or function. However, they emphasizes that a role and status is not the same thing. A status is bound to a set of formal and informal rights and duties. A role is the behavior a person

chooses on the basis of his status. A status allows for many different roles, but not just any role. (Aase & Fossåskaret, 2007 Pp. 63 - 64). One of the statuses I wanted to avoid was the status of an expert. I did not want to give them any impressions that I was there to tell them how to teach. Hammersley and Atkinson (1996 p. 119) emphasize that this "expert status" is an issue when studying teachers. Teachers are in general skeptical towards outsiders and it is important to realize that I came to the field as a person already with twice as much education as an ordinary teacher in Tanzania, which could lead the participants to place me in the category of experts. When someone has the status of an expert, the participants may not feel confident to share information because they don't want to be criticized. I did my best to act in conflict with a role of an expert. I started by saying clearly to the participants that I was here to learn from them and I found their teaching interesting. I kept asking questions: How do you do this? Why did you do that? How is this? The teachers were constantly reminded that I was there to learn about their practice.

Instead of being seen as an expert, I wanted to create a status that was a part of the staff at the school. I offered to help marking tests, attended staff meetings and tried to bond with teachers in tea brakes. After some weeks, I got to know many of the teachers. This helped me to establish a status as a teacher/assistant at the schools and this further affected the students, as they addressed me as a teacher in the hallways.

Another valuable status was the status as a researcher. Although this status can be problematic in the same way that the status of an expert can be, it opened some doors for me. As research and higher education has a very high standing in Tanzania, the participants felt that it was a positive thing to let me in. For instance, the headmaster at the governmental school said that if it was in the name of research, it was only positive and for the best that I interviewed him. This was also the general consideration by the participants, as they were eager to ask about my project and generally interested in my work.

One status I could not just as easily get rid of was the status as a *muzungu*. This is an expression for a person with European descent. There is no doubt that I stood out, both in the classroom and in the school yard. It was impossible to avoid the status as a muzungu, but I did not need to act like one. With the status of muzungu comes a whole list of expected roles and expectations from the locals. A muzungu is rich, not interested in the locals and comes to Tanzania mostly on holiday or as a volunteer. My role was something else. I was indeed

interested in the locals and in the educational system. I tried to counteract the role of a muzungu and at the schools it did not feel I was treated as a muzungu in the same extent that I was outside the school. I noticed a distinct difference in how the local people looked at me in the street if I went down the street in a t-shirt and shorts, compared to my teaching uniform. Wearing a shirt and black pants, no one came up to me and attempted to sell me anything. When I wore just a t-shirt and shorts, I looked like a tourist and fitted the role of a rich muzungu on holiday. Then I was approach constantly by salesmen, taxi drivers, etc. This meant that I dressed up to a status that acted against the role of a muzungu.

After a few weeks, I felt that I had found my place at the schools. I had been given a unique status. I was part researcher, part teacher/assistant and also a muzungu that not necessary acted as most of the muzungus visiting Tanzania. I tried not to be seen as an expert or someone that came to judge they work. I also became a small-talk partner in the tea breaks and especially in the non-governmental school I felt as a part of the teaching staff. I felt comfortable with this status and it allowed me to get the information I wanted. The name of my role was Mr. Edward. This was how I was addressed at the non-governmental school. I told them my name was Øyvind, but they could call me Edwin. They heard Edward and after that I was Mr. Edward.

4.2.4   The Course of the Fieldwork

The first weeks I started with the non-governmental school because I wanted to focus on one school at a time, giving me some time to establish my research before moving on to the next school. I got to know the participants well, and at the same time establish a friendly relationship with the rest of the teaching staff. I spent a lot of time just sitting in the staff room chatting and having tea. The participant teachers had a lot of time in between the classes and we spent that time to get to know each other. I felt that the teachers let me into their day to day practice quickly. But in addition to gaining the trust of the teachers, it was just as important to let the students become familiar with me and my presence in the classroom. Before I started the observations in the classroom, I introduced myself to the students and told them about my intentions.

I did my first two observations in the classroom already on the second day. I wanted to establish my role in the classroom at an early stage, giving the teachers and students time to get used to my presence. This went surprisingly fast and both the teachers and the students did not seem to

notice me very much after just a week of sitting in the classroom. Nevertheless, I felt that I needed some more time at the school before conducting interviews.

After two weeks doing fieldwork at the non-governmental school, I started shifting my focus on to the governmental schools and gradually leaving my established field at the non-governmental school. The non-governmental school had midterm exams this week and this allowed me to spend time at the other school. I talked to the principal and to the teacher of Form IV, Mr. Mgeni. I gave them the same information letters and letter of recommendation. They accepted my research without much discussion and the fact that my fellow master students had been to this school for some time already, made my entrance to this school easier. This was the case for Mr. Mgeni and the classes of Form IV. In Form IV there were six classes, and the other researcher wanted to conduct research in two of them and I wanted to observe teaching in two other classes. I also planned to start research at Form III, however the Form III students were not at the school the first week I was there, and in the second week the teacher had to stay home with a sick child the first couple of days. I did not start researching Form III before in the middle of the fourth week and I had less time getting to learn to know the students and the teacher. On the other hand, in Form III I did not share the teacher with the fellow master student, which eased my access to the teacher, and helped me in getting a lot of observations and getting to know the teacher well in less time.

After spending a week getting to know Mr. Mgeni at the governmental school, I spend the next weeks alternating between the two schools. Having their timetables allowed me to adjust my schedule to get as much observation as possible. It soon became obvious to me that there was a significant difference between the approaches to timetables at the two schools. In the non-governmental school the teachers were strictly following the timetable and always turned up to the teaching, while this was not the case in the governmental school. The teachers did not seem to have the same relationship to the school's timetable. On several occasions the teachers came late to their classes, or did not show at all. This is an interesting observation for my analysis, but it is also a methodological point in the sense that this hindered lot of my observation. As the weeks went by, I feared that I would not get enough observations. I could not just tell the teachers to teach the classes, as this would compromise our relation as trusting participants. This was also problematic in the sense that I wanted them to follow normal procedures. I did not want them to alter their practice just to satisfy me. Therefore, I waited to the second to last week

before kindly asking, not to be more on time, but if it would be possible for them, especially Mr. Mgeni, to teach more of their classes. I explained to them that I wanted to learn as much from them as possible before I had to go home. After this, they did show up for more classes, but not all. This choice I made to "interfere" with our relation can be validated by two factors. The first is that I did it late in the process and by that giving them time to show their normal practice in the weeks before. Secondly, the most interesting for me at that stage was not how they followed the timetable, but how they acted in class. I did not register a change in his teaching after I asked him to teach more classes, and this meant that my request did not affect the most important, the way he taught.

4.3   Content Analysis

The text of the national syllabus has been object of content analysis. Jacobsen (2005) explains that content analysis is to reduce the data material to a set of relevant categories and by this compare and look for differences and similarities.

I compare the formal curriculum to the teachers' interpretation of it; the perceived curricula. I do not compare the perceived curricula with my own interpretation of the syllabus. This is an important difference, meaning that my analysis of the syllabus needed to be a content analysis.

I have previously explained the categories of the analysis; Teaching methods, teaching materials, cognitive processes and content emphasis. Some of these categories were also further divided into smaller categories, as evident in the analysis. The categorizing was a time consuming task and at this part the analysis is quantitative oriented. The categories were identified in the content of the syllabus and then applied to the analysis of the other substantive domains. Did the different domains emphasize the same topics, use the same material and teaching methods? What understanding did they have of these learning strategies?

I also did a content analysis of a midterm test made by Mr. Mgeni and his colleagues. The test was analyzed using much of the same categories.

4.4   Interviews

I conducted nine different interviews. The four most important interviews were with the four participants. I also interviewed the two headmasters at the schools. In addition, I did an interview with a geography teacher at DUCE, one school owner and a local chair person of TAMONGSCO. In this section, I will discuss the nature and proceedings behind these interviews.

4.4.1 The Interviews with the Participants

These were the most extensive interviews and primary source of the perceived curricula. In order to study how the teachers interpreted the syllabus, these interviews were essential and thoroughly prepared. I had prepared interview guides (appendix 4 and 5) before I traveled to the field, which contained questions sorted into some of the categories already explained. However, as I entered the field, new questions emerged and other categories developed. Thus, leading up to the interviews, I changed the guides repeatedly. The interviews were semi-structured, which gave me the opportunity for follow-up questions.

The questions were designed to explore different interpretations and practice of the participants. The interview guides were fairly extensive resulting in long Interviews, which lasted for about an hour to an hour and a half. Given that the interview guides was extensive, I wanted to spend some time with the participants before I conducted any interview. The first interview was conducted two and a half week into the fieldwork.

The setting of the interviews was at the school. I wanted the participants to feel comfortable and in control. I considered taking the participants to a more discrete location where we did not get interrupted, such as a café, my flat or something in that order, but decided that it would place the participants in uncomfortable situations. Luckily we managed to find some discrete and quiet locations at the schools.

The interviews were digitally recorded and for this I needed the consent of the participants. I guaranteed them anonymity and that all recording would be deleted after transcribing them.

4.4.2 The Interviews with the Informants

The two interviews with the headmasters at the two schools were very much like the interviews with the teachers. It was semi-structured interviews conducted in their offices.

The interview with Sofie A. Okash, a chair person in one of TAMONGSCO regional offices, was a different kind of interview. This was an interview with both me and the two other masters students as interviewers. We all met up at a café for an unstructured conversation. This interview was not recorded.

During my fieldwork, I heard of a school in the same district that previously had the national syllabus and changed to Cambridge, but after just one year they changed back again national syllabus. I wanted their view on that, but the founder and owner of the school were not in the country. Therefore, I conducted an interview by mail. This was just a very small interview and not significant to the project, but it is interesting in determining the argument for having the two syllabi.

The last planned interview in my fieldwork was with Eliud Kabelege, a geography teacher at Dar Es Salaam University College of Education. Unfortunately, my grandfather past away at the end of my fieldwork and I made the decision of going home to the funeral. The plan was to spend six weeks at the schools and then a week or so in Dar Es Salaam. However, after the six weeks period, I traveled back home instead of going to Dar es Salaam. The reason why I was able to do so, was that the two other students traveling together with me, were going to Dar es Salaam. I asked one of them to conduct the interview for me. He had planned to interview the same person for his project and he gladly asked some questions on my behalf. I had prepared an interview guide with questions that I gave him (attached as Appendix 6).

4.5   Participant Observation / Observation

The line between the term fieldwork and participant observation is not necessarily clear. Thaagard (2010 p. 65) points out that the terms are overlapping each other, but she emphasizes that there is a certain distinction between them. Participant observation refers to the procedure the researcher may use during a field work, which means that participating observation is a methodological choice within a fieldwork.

I used participant observation in the field to identify the operational curricula, but also to help me identify the perceived curricula. From day to day events and conversations, I got information about their interpretation and attitude toward the syllabus I did not get in the interviews.

The advantages of participant observation are many. The researcher gets a first-hand experience and comes closer to the participants (Fangen, 2010 p. 15). The researcher also gets insights, answers and useful information he has not even asked for (Aase & Fossåskaret, 2007 p. 30). One of the biggest advantages of a participant observation, and definitely one of the most interesting aspects concerning my thesis, is the method's ability to spot the differences with what the participants say (for instance in an interview) and what they actually do (Fangen, 2010 p. 15). By linking the participants' descriptions in interviews to observations made by the researcher, the researcher can, to a certain extent, compare and analyze these two sorts of data. This is one of the key factors in my master's thesis and could reveal a gap between the perceived curricula and the operational curricula.

4.5.1 Degree of Participation

Aase and Fossaskåret (2007) make it clear that there are difference between the terms *observation* and *participant observation* . In a way all studies are observations. The quantitative researcher is also observing his findings, maybe through a table or a chart, but he is not participating in the observation. So, where is the line between observation and participant observation drawn? When a researcher conducts an observation he is usually present in the field, but that does not necessary mean that he is participating in any certain extent (Aase & Fossåskaret, 2007). To be conducting a participant observation, the researcher needs to take part as one of the actors he is observing. The researcher then holds a double position; he is both a participant and a spectator. In my case I participated in the everyday life at the school, such as discussion at tea time, staff meetings, etc. This allowed me to make findings outside the classroom and interviews. That is why I carried a notepad with me at any time, so when I had some time to spare I wrote down my experiences.

4.5.2 Observation in the Classroom

I also conducted observations that are on the borderline between observation and participant observation. I observed the teachers from the back of the classroom without any apparent participation.

The observations in the classroom were my primary source for the operational curricula. A lot was happening in a session lasting for 90 minutes with 50-60 students. To assist me in filtering out what was relevant for me, I developed an observation guide (appendix 7). This guide also included the categories of the analysis, in addition to some others points, such as events and notes. *Events* were where I depicted the course of the class and noted special

occurrences. *Notes* were my immediate reaction after the class was done. This helped me in structuring the observations. During the course of fieldwork I observed 23 classes, 10 at the non-governmental and 13 at the governmental.

4.6   Ethical Considerations

In any fieldwork, ethical issues are apparent because of the closeness to the participants. Fangen (2010 p. 191) identifies two major ethical considerations to a research; informed consent and confidentiality.

4.6.1   Informed Consent

When an individual agrees to be a part of the research, he/she needs to be given information about intention of the project and the possible advantages and disadvantages by participating. The researcher is obligated to inform the participant with information good enough for them to decide whether they want to be involved or not (Fangen, 2010). As explained earlier, I gave the participants both written and oral information about the project. However, one characteristic of fieldwork is that it changes character during the course of the project and the researcher need flexibility. Hence, I did not have much accurate information early on. At the same time both Fangen (2010 Pp. 191-193) and Hammersley and Atkinson (1996 p. 295) stresses that the researcher does not need to disclose his entire project. It could also be significant to withhold some information, because too much information might lead the participators to make assumptions on what the researcher is looking for. The participants could end up giving specific answers they think the researcher wants, and not necessarily what they actually mean. The information I gave them did not disclose more than the generals of my project.

4.6.2   Confidentiality

Confidentiality was, in the case of my project, not difficult to achieve. The schools and participants have been given fictive names, and I will not disclose the location of the schools. I only make a point that both schools are located in an urban environment. This was also expressed to the participants. When interviewing other important persons in the educational system, such as organizations and teacher educations, confidentiality was not an option. To give these interviews some credibility, I felt that it was important to name the organization and the person I talked to. They gave their approval to be cited with full name.

4.7 The Quality of the Data

The trustworthiness of the data is an factor in any research. Nevertheless, Fangen (2010 pp. 236-237) points out that qualitative research cannot be judged by the same standards as quantitative research. It produces different forms of data. She emphasizes that many researchers see the term validity and reliability as unfitting to qualitative research. In this thesis I will use these terms, but not necessarily strive to achieve all the aspects of them.

4.7.1 Validity

In any research it is important to be sure that the questions that the researcher asks are relevant and actually examine or measure what the researcher intend them to do (Holt-Jensen, 2009 p. 106). Fangen (2010 p. 237) explains that participant observation is a method that normally insures a high degree of validity. The method does not have the same issue of influence of certain aspects as a questionnaire or observation in a lab, because the researcher is aiming to be a part of the natural surroundings of the participants. However, it may be difficult to measure the exact validity of the interpretations conducted by a researcher (Fangen, 2010 p. 250). Fangen explains that it is possible to place the interpretations on a scale of probability. The interpretations may be classified as probable, plausible or pure speculating interpretations. The more the researcher can argue for his findings with relevant comparative data and theoretical evaluations, the more probability for a probable interpretation. Jacobsen (2005, p. 215) explains that if researchers agree on a description, it creates a intersubjectivity. I compare my findings to relevant research towards the end of my thesis and aim to point out certain intersubjectivity.

Fangen (2010 Pp. 237-238) suggest that the researcher needs to discuss his interpretations with others. This is called communicative validity. Through the entire project, I have discussed with other researchers, experts and supervisor about my findings. By reading the thesis at different stages, other researchers have contributed to a dialogue and debate concerning the validity.

4.7.2 Reliability

"In studies based on participant observation, reliability could be defined as a degree of coherence that incidents are placed in the same category from different observer or the same observer in different occasions" (Fangen, 2010 p. 250). In other words: Would another researcher notice the same and interpret them in the same way? This could very much be impossible because of the very nature of participant observation. An observer is selective and do not necessarily participate

in the same way. Fangen (2010 p. 251) rather asks the question; would another scientist reach the same conclusions if given your observation notes? This eliminates the factor that researchers observe selectively, but if not given the same categories, another scientist would most likely develop his analysis differently.

These questions emphasize that that the reliability of a participant observation is difficult to evaluate, but this is not the only problematic issue concerning evaluation of the reliability in qualitative research. The shear fact that qualitative research "produce data" through interpreting processes makes it harder for other researchers to recreate the results. The reliability is very much dependent on the description of the research. A detailed methodical description would help other persons to evaluate the reliability (Fangen, 2010 p. 251). This is also an intention in this thesis. I have thoroughly described my methodical choices and by that increased the transparency of the research.

5.0 Identifying the Gaps

I will initiate the analysis by explaining the structure of the syllabus and how the participants see it. Further, I will use the categories explained in chapter 3.6 to systematically analyze the implementation of the syllabus. I embrace one category at the time and investigate how it is implemented through Goodlad's (1979) substantive domains.

The Structure of the Syllabus

The edition of the syllabus included in this analysis is the second edition, published in 2010. In the beginning of the syllabus there is a short introduction to education in Tanzania and the geography subject. The rest of the syllabus is divided into four different parts, one for each form. It is further divided into main topics and sub-topics and lastly into specific objectives, making up what the syllabus calls *the content matrix*.

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/ LEARNING STRATEGIES	TEACHING/ LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
1. STRUCTURE OF THE EARTH	1.1 The earth's crust, the mantle, the core and their respective characteristics.	The student should be able to: 1. Identify concentric zones of the earth.	(i) By using a model of internal structure of the earth/diagrams, the teacher to guide students in groups to observe and identify the zones (the crust, the mantle and the core) of the earth. (ii) The teacher to guide students to clarify on the concentric zones of the earth. (iii) The teacher to guide the students to draw and label the concentric zones of the earth.	• Models of inner structure of the earth. • Diagrams showing concentric zones of the earth.	Are students able to: 1. Identify concentric zones of the earth? 2. Draw diagrams illustrating the core, mantle and crust?	16
		2. Account for the variation in density and thickness of the concentric zones of the earth's crust.	(i) The teacher to assign students to read written materials on structure of the earth and collect information for variation of density and thickness of zones.	Written materials on structure of the earth.	Are students able to account for the variation in: 1. Density of the concentric zones? 2. The thickness of the concentric zones?	

Figure 5.1: Page from syllabus – the content matrix

Figure 5.1 shows a part of the content matrix of the first main topic in Form III. The main topic, the sub-topic and specific objectives are in the first three columns. Teaching /learning strategies that the teachers should use in that specific objective, are explained in the next column. In the adjacent column, the teaching/learning resources recommended are listed. The

second to last column is the assessment in which the syllabus has converted the specific objective into a yes-or-no-question. The column to the far right is the number of periods the teacher should use on that particular main topic.

5.1   Teaching Methods

The first category is the teaching methods. Does the formal curriculum lay stress upon other methods than substantive domains further down in the implementation process?

5.1.1   The Formal Curriculum

The formal curriculum, the syllabus, is the starting point of the implementation process (Goodlad, 1979) and this is how the syllabus' introduction presents the intentions for its teaching methods:

> Teaching and learning strategies are techniques and procedures of teaching and learning a specific objective from a topic in lesson. They both apply to teacher and learners. The teacher is expected to apply series of active interactions which will eventually lead to active learning students. These strategies from the fourth column in the content matrix. (MOEVT, 2010a, p.vi)

It follows that these intentions are not mere suggestions and the teacher are to implement them in their teaching. In nearly all topics the description of the learning strategy starts with "The teacher to guide students to…". Often it is not explicitly mentioned what kind of method the teacher should use. For example; "The teacher to guide students to describe how the International Date Line is used" (MOEVT, 2010a, p. 19). In situations like this, it is difficult to categorize what kind of strategy the teacher should implement, but in other situations it is clearly expressed: "Teacher to guide students brainstorm on the term rotation" (MOEVT, 2010a, p. 11). I have counted the different methods expressed in the syllabus and table 5.1 is a representation of what methods the syllabus emphasizes. The percentages only include the teaching methods that could be categorized from the syllabus.

Table 5.1: List of teaching methods in the syllabus

Methods	Form 1	Form 2	Form 3	Form 4	% of the total
Debate	3,5 %	0,0 %	0,0 %	1,5 %	1,0 %
Group Work	7,0 %	3,0 %	22,0 %	0,0 %	8,2 %
Excursion	8,8 %	14,1 %	3,7 %	1,5 %	7,6 %
Brainstorm	5,3 %	6,1 %	2,4 %	7,6 %	5,3 %
Teacher Explain	3,5 %	0,0 %	0,0 %	0,0 %	0,7 %
Discussion (Plenary and in Groups)	28,1 %	54,5 %	40,2 %	50,0 %	44,7 %
Teacher Demonstrate	7,0 %	0,0 %	6,1 %	1,5 %	3,3 %
Dramatization	3,5 %	0,0 %	0,0 %	0,0 %	0,7 %
Reading	7,0 %	5,1 %	6,1 %	10,6 %	6,9 %
Group Presentation	3,5 %	13,1 %	19,5 %	24,2 %	15,5 %
Teacher Illustrate	19,3 %	0,0 %	0,0 %	0,0 %	3,6 %
Presentation	3,5 %	0,0 %	0,0 %	0,0 %	0,7 %
Role Play	0,0 %	1,0 %	0,0 %	0,0 %	0,3 %
Group Reading	0,0 %	1,0 %	0,0 %	0,0 %	0,3 %
Research Project	0,0 %	2,0 %	0,0 %	1,5 %	1,0 %
Practice	0,0 %	0,0 %	0,0 %	1,5 %	0,3 %
Total	100,0 %	100,0 %	100,0 %	100,0 %	100,0 %

As evident from the list, the syllabus expects the teacher to use a lot of discussions in different ways. There is also planned a lot of excursions and other sorts of group work. Sometimes, the syllabus demands more advanced methods such as role play, dramatization and research. The syllabus also requires that the teacher invite resource persons and experts into the classroom, such as a meteorologist, an agricultural officer and a speaker from the Department of Forestry. It is evident that much of the teaching methods are what Repstad and Tallaksen (2011) characterize as learner-centered.

All this make up a very detailed explanation of how the syllabus expected to be implemented, constructing a curriculum that encourages a *fidelity of use* (Marsh, 2009). Considering this, how do the teachers interpret and perceive these expectations from the formal curriculum?

5.1.2   The Perceived Curricula

Frances Klein, one of Goodlad's associates and co-authors, explains that directives coming from the societal domain through the formal curriculum needs to be refined and sometimes even discarded by the teachers (Klein, 1979). In determining how the participant teachers interpret these directives from the syllabus, I asked Mr. Mgeni if the syllabus decides how he is going to teach:

> No, because myself as a teacher I have already learned the teaching techniques. Maybe when we teach the topic of map reading, what kind of techniques am I suppose to use. When I teach environmental issues, what kind of teaching methods am I suppose to use. That's why, but in the case of the syllabus, it doesn't decide maybe teaching techniques.

This fits the remark of Goodlad that teachers tend to stay with the pedagogical methods they have learned in their training (Goodlad, 1979, p. 62-63). Despite that the syllabus expresses an expectation that these teaching strategies are to be implemented, Mr. Mgeni interpret that the syllabus should not decide his way of teaching. He does not feel that the syllabus takes into account the different levels of the students:

> Because sometimes you can find that the syllabus is guiding you to, but if you compare the learners their learning capacity, how they perceive what you are teaching, it is different, So sometimes you can decide them to take notes. For example the syllabus is guiding you as a teacher to group the students to discuss. You can find that in some classes students are slow learners. Sometimes you group them and tell them to discuss this subtopic would be impossible. So, myself, as a teacher, I am supposed to use other techniques. So, as to ease out the learning. for the slow learners.

Mr. Mgeni expresses that he must adapt the syllabus to the learners. Miss Ngoye has a different interpretation:

> Me: Yeah, do you feel that the syllabus decides or tells you how to teach?
>
> Miss Ngoye: - Yes, because as it is, it is the one which makes me to use those methods. Because I am forcing to finish the syllabus. So no way out.
>
> Me: - I see, and why do you think that the syllabus needs to tell all the teachers in Tanzania that you have to do like this?
>
> Miss Ngoye: - They have to do that so that all teaching activities in all the country be the same. So when the exams come every student could have been taught what was directed there.

At this point Mr. Mgeni and Miss Ngoye expresses an example of the two different approaches to the curriculum explained by Marsh (2009). Mr. Mgeni feels that the syllabus needs adaptation to fit the students. Meanwhile, Miss Ngoye expresses fidelity to the syllabus. She feels that the teaching needs to be uniform all over the country. Consequently, the participant teachers have two different perceived curricula on this matter.

The difference between the two teachers' interpretations also exemplifies itself when I asked them how they felt that the students ideally should learn geography. Mr. Mgeni said that the methods in the syllabus do not take the level of the students into account and that differentiation would be hard. When I asked Miss Ngoye the same question, she answered group discussion, visiting sites, observe, etc. These methods are more in line with the syllabus, indicating that Miss Ngoye perceives fidelity to the syllabus as important. However, this does not necessarily mean that her operational curricula express the same thing, which I will discuss further on.

Discussion and Group work

As explained earlier, the national syllabus emphasizes discussion as one of the most important instructional methods. I investigated how the participants interpret this.

> Mr. Mgeni: - Discussion. It means that it is a teaching technique. The teaching techniques it depends on the level of the learners. Let say myself, I am teaching geography in Form ones, it will be difficult to form one students to group in five or six and then discuss the issues of maybe the solar system or planet. First of all I am supposed to teach them and then give them task. On order to maybe evaluate them. Have they understood or not? I am supposed to give them a task. The issues of discussion it depends on the levels of learners.

Again, Mr. Mgeni concludes that students are too poor to handle the methods. He argues that the students in Form I, thirteen/fourteen years old, cannot contribute in a discussion. By that, Mr. Mgeni interprets discussion as being an advanced method with little possibilities of differentiation between students: "Yeah, I think the issues of the brainstorming and the discussion, it is more effective for the advanced learners." He continues:

> One of the challenges is most of the students, when you give them discussion; most of them are not participating. You can find that in maybe group of 6, only two students are effective, but other students are not. Even when you give them tasks, a group work, maybe one or two they can write the task. And

the coming periods you ask them: Have you understood? They can say *yes*. But when you come and ask them questions, nothing .

On this ground Mr. Mgeni perceives discussion as not suited for implementation. Miss Ngoye has another interpretation of what a discussion should be:

The discussion. Arrange some groups, give them work, maybe give them some text to read and discuss. But no books, the classes are big it is tough to give them a discussion today. They will have to discuss then they have to come to the next period, maybe made summary, you listen what they have discussed. So it is tough.

Miss Ngoye expresses no concerns of the levels of the learners when it comes to discussion. However, she does point out that the practicalities could be problematic. She also has an understanding that "question and answer" is the same as discussion.

Me: - So how do you use discussion in class room?

Miss Ngoye: - I use question and answer. I ask them questions, they answers. Sometimes I arrange them in tables. Discuss with you friend for five minutes or what.

This understanding is questionable because question and answer does not necessarily give the students the chance to discuss a problem, they only come up with the correct answer (K. Repstad & Tallaksen, 2011). Consequently, both Mr. Mgeni and Miss. Ngoye say they do not use discussion to a certain extent. Miss Ngoye uses it sometimes and Mr. Mgeni not at all.

Group work, of many sorts, is also heavily emphasized in the formal curriculum. I asked Mr. Mgeni why he thought the syllabus wanted the teachers to use a lot of group work:

You know, the syllabus, it direct me as a teacher, but sometimes myself as a teacher I am supposed to observe my learners. Sometimes the syllabus can direct me to use group discussion, presentation and whatever. But myself I am a teacher. I am realizing my students are poor, I am supposed to change the teaching methods, yes. Because here it is just use of presentation, but for example in form ones. You cannot tell the form one students to present. So first of all I am suppose to teach, then maybe the way of the syllabus I improve them day by day.

As several times before, Mr. Mgeni explains to me that he cannot exercise the methods specified in the syllabus because of the levels of the learners. He feels that the students cannot work in groups.

Excursions

The syllabus also expects the teacher to take the students on excursions. Both the teachers perceive this part as an important teaching method, as Mr. Mgeni explains: "Okay, the issues of learning outside the classroom, it is easier for the students to get something other than teaching. They learn by see."

Both Miss Ngoye and Mr. Mgeni explain that they use to go to the local airport to see the weather stations, to national parks to learn about tourism and to a hydrological station to learn how hydro electrical power is processed. However, it became clear that this was not for all the students.

> Me: - But doesn't this cost a lot of money?
>
> Mr. Mgeni: -No, because the students themselves. They contribute themselves.
>
> Me: - Does this happen all the time?
>
> Mr. Mgeni: - Yeah, it depends on how the students themselves. Because the school as a school, it is not easy for the school to provide the safari for the students. But the students themselves they contribute.
>
> Me: -But does that mean that field courses and things like that are only for the those who can afford it?
>
> Mr. Mgeni: - Yeah!
>
> Me: - But, what about the others?
>
> Mr. Mgeni: - They just. When the others come back they come back they taught the other what they have seen.

On this point the teacher both express certain fidelity to the syllabus, but with the consequence that the students who cannot afford the excursions are forced to stay at the school.

Role Play

At one point, the syllabus expects the teacher to "using a role play students to demonstrate the carious uses of water". I asked the participant teachers about this:

> Me: - Okay, I see. Let's go back to the syllabus, on page 47, there is something I am wondering about under the subject of water importance. It is suggested that students using a role play. What does that mean?

Miss Ngoye: - Mhm….. Okay….. I don't remember this.

Me: You don't know?

Miss Ngoye: - No.

Me: I see. But how do feel that there is things like this in the syllabus? That you don't even know what is? But the Tanzanian government wants you to do it?

Miss Ngoye: - It is bad, because the syllabus cannot fulfill the aim.

Miss. Ngoye does not know what role play is, making the implementation of it virtually impossible. She blames the curriculum makers in having failed in giving the teachers guidance about methods like this:

Miss Ngoye: - Because, sometimes, when they bring a new syllabus they have do seminars to the teachers. What is written in the syllabus?

Me: - And you don't have that?

Miss Ngoye: - It is not normal. Maybe few teachers can be called for the seminar. And when they came back they don't facilitate with other teachers. And sometimes not at all. So what I think is, when the syllabus is provided by the government teacher first are to be given some seminar.

Me: - I see. So you are missing some guidance for how to use the syllabus?

Miss Ngoye: - Even the methods. In the lesson plan there are methods which are written. The teacher should do this and this ad this. But no seminar about it.

Mr. Mgeni is also unfamiliar with role play, even though he tries to explain it:

Okay, the role play. You know. You just group the students into groups. Role play it means that. Role play techniques ey? It means that you take maybe the five students in groups, then you give them different questions. Maybe one question concerning photographs, maybe other. You have five groups, then give them task. After giving them task every group discuss their subtopic. Then after discussing, then you ask those groups. Then you talk, maybe those who have photography. This group have types of photographs, this groups has importance of photographs. Then, after discussing different subtopic at the same time, then, maybe you take those who have started this here and this here and this here and this here. It means that they must share something common. That is role play.

That is not role play. As K. Repstad and Tallaksen (2011) explains, role play is about giving the students different roles they need to act. This indicates that both Mr. Mgeni and Miss

Ngoye lack training and understanding of the method, as probably the majority of the Tanzanian teachers, resulting in perceived curricula without this method.

To sum up; in their perceived curricula the participant teachers expressed different interpretations. Miss Ngoye express certain fidelity, meanwhile Mr. Mgeni did not perceive the syllabus as methodical decision-maker.

5.1.3   The Operational Curricula

After spending time observing their operational curricula, there emerged some clear patterns. The majority of their teaching consisted of lecturing the class orally and written (on the blackboard) without engaging the students to any extent, rendering the students passive (K. Repstad & Tallaksen, 2011). Another, more derogatory, word for this kind of teaching is "chalk and talk", and these methods are not learner-centered.

The two teachers spent a lot of their teaching facing the blackboard, writing large amounts of text from the textbook on the board. I summed up one of the lessons of Mr. Mgeni like this: "A lesson with lot of board writing and the students become very little active. They repeat some things he says and write notes ". Mr. Mgeni's emphasis of lecturing method is shared by Miss Ngoye. In one class, lasting 2x40 minutes, she used 60 minutes writing on the board. She filled the blackboard (at least 4 meters long) twice with text extracted from the textbook. The text contained a lot of difficult sentences and terms. This is a small excerpt:

Types of data:

- Data simply means information. It is an easy numerical fact collected systematically and arranged for a particular purpose.

(i)   Primary data:

These are data collected directly from the field and they are referred as firsthand data or original data gathered through interview, observation and questionnaires.

(ii)   Secondary data:

These are the data obtained from excising information. These are collected from people that are already recorded or written in textbooks, magazines, maps, statistical abstracts and the like

Primary and Secondary data are to be further subdivided into:

(i)   Individual data – The total number of individual value is provided

(ii)   Grouped data: Data are provided in groups or classes/figure and given in several values all in a certain class.

(iii)   Discrete data are quantity whole number.

        Eg. 200 goats or 100

(iv)   Continues data – These states any values, individual fractions or diagrams

<div align="right">(Observational notes)</div>

I asked Miss Ngoye, before the class, what she planned to do in this class. She answered that she was going to give them notes by writing on the board and that the students were begging for the notes for the exams. I summed up the lesson like this:

> She writes all this on the board without giving them any sort of explanation through the whole class. The students reproduce what's on the blackboard and it contains a lot of difficult words and terms that she fails to explain. This is a good example of a result of teaching for the test. They write it down because it is important, but they have no or little comprehension of the terms. (Observational Notes)

A couple of days later, I was observing Miss Ngoye in another class teaching the same lesson. However, this time she did not write the text on the blackboard herself. She made a student go up and write it. The student was up there for half an hour while Miss Ngoye sat in the back of the class. I wrote this in my notes:

> A lesson with a lot of information and citation. She gives the students very long and complex definitions on every term. She is very depended of her one book. She does not give examples of the definition making them very theoretical and far from real life. (Observational Notes)

By sitting in the back, Miss Ngoye did not offer any explanation to the complex text and this illustrates the general practice in the majority of my observation; a lot of difficult definitions are given without much explanation. In my experience, I felt that the students were only supposed to memorize them, not understand them.

The heavily usage of dictation became another clear pattern and was another way of giving the texts from the textbooks to the students. In almost every lesson I observed, the participant teachers used dictation of some sort. They usually had a definition or an explanation they wanted to give the students. One example of the usage of dictation was in a lesson with Miss Ngoye. She was talking about the importance of statistics and read up eight different points on the importance of statistics, which all very long and complex. The dictation went on for a considerable time, about 10-15 minutes. She was reading very fast and did not repeat herself

many times. The students wrote everything, but my impression was that they understood little of what they were writing. Dictations were often of this character; the teachers read out from the book and the students wrote it down with no further explanation or elaboration given.

It became evident that the textbook was an important factor for the teachers, much more important than I would have expected. In the beginning of this thesis I argued that the textbook might not be as important as in other countries. It turns out to be a false assumption. It looks like the textbook is extremely important in giving the students the necessarily knowledge for the exams. Klein (1979) also emphasize that teacher can make teaching default by letting the textbook become the curriculum. The importance of the textbook also set restraints on the way of teaching making dictation and lecturing the preferred methods.

Discussion

However, in the course of the observation I also encountered some other teaching methods. Discussion is one of the most important methods according to the formal curriculum, but as explained earlier, the teachers did not seem to give discussion much attention in the perceived curricula. The actual usage of discussion in the operational curricula also reflects this. Discussion was not a huge part of their teaching; nevertheless it was used to a certain extent, especially by Miss Ngoye. She actually had one lesson devoted to discussion alone, all though this was straight after the interview where we talked a lot about discussion. This could be the reason why she did this, but the discussion was interesting nonetheless. Her discussion tasks were a mix between group work and discussion. She told the students to arrange themselves into groups. She wrote on the board:

Group work

1. *A) Discuss and make difference between measures of central tendence and measure of dispersion.*
   B) Calculate the following based on individual data:
   - Mean deviation
   - Range
   - Variation
   - Standard deviation

2. *Basing on grouped data discuss the following*

   a) Mean

b) Mode

c) Median

d) Standard deviation

e) Range

Miss Ngoye shows certain fidelity to the syllabus at this point. In this particular topic the syllabus says: "the teacher to guide students in groups to discuss the significance of the mean, mode and median in daily life" (MOEVT, 2010a, p. 121), making this one of the few places where I observed the teacher implementing the method expected in the syllabus. However, the assignments themselves were not well formulated and gave me problems of characterizing it as a discussion. Assignment 1 A could generate a discussion. 1B and 2 was more of a group work. It is very hard to discuss the word "mean" without any given direction from the teacher. What Miss Ngoye was looking for was the definition of the term "mean" and not a discussion.

Role Play

As previously mentioned, role play is mentioned once in the formal curriculum. It is interesting to note that in the 2005 version of the syllabus, role play was mentioned to a much greater extent. Although it is not a substantial part of the current syllabus, I wanted to see how the participants interpret it. Miss Ngoye did not seem to know what it was. Mr. Mgeni tried to explain role play for me, but ended up explaining another method completely. A couple of days after the interview, Mr. Mgeni tried to show me this in practice (without me asking for him to do it). Mr. Mgeni started dividing the class into groups of 8-10 students. He assigned a question to each group which they would discuss, and came over to me and said he was doing a role play. He said he was going to let them discuss and then rearrange the groups so the students can learn from each other. This understanding of role play is the same as he explained in the interview (the perceived curricula) and illustrates the point that the participant teachers are uncomfortable with methods they have not been trained to do. Mr. Mgeni's "role play" could have been a great starting point for a group discussion, but after giving each group a question he leaves the classroom and does not return before they are done "discussing". When he walked out, the noise increases and concentration decrease, and any were not participating. I could not help remembering back on the interview where he said that the reason why he did not use discussion to any certain extent is that many of the students did not participate. My observation was that almost all the students were participating in the

discussion before he left. When he came back, he took about one student from each group and assigned him/her to another group, barely mixing the groups. He then left again and did not come back before the class was over. He came in and told the students to pack up. Mr. Mgeni's "role play" was not a role play and it became obvious that both he and Miss Ngoye were very unfamiliar with this method, making it impossible to implement it in their operational curricula.

5.2   Teaching Materials

The teaching materials are the resources used in teaching, and can be everything from a single piece of chalk to computers and projectors. What kinds of materials are explained in the formal curriculum and how are they interpreted and implemented?

5.2.1   The Formal Curriculum

The syllabus suggests teaching materials, meaning that the developers of the syllabus have designed the curriculum to fit these materials. The list of all the different teaching materials, sorted by forms, is attached in appendix 8. Most of the materials are different kind of maps, texts, diagrams and photographs.

It is also listed more advanced materials. In Form I it is listed a *Stevenson Screen*, an advanced shelter for meteorological instruments. In Form II, one of the listed materials is *real jewels.* There are also other advanced materials, such as a seismograph, videos, solar energy equipment and a weather station, making up an advanced and demanding formal curriculum. Even though it is expressed in the introductions that these teaching materials are merely suggestions, it is interesting to investigate how the participant teachers interprets and implements these suggestions.

5.2.2   The Perceived Curricula

Edith Buchanan (1979, p. 151), another of the co-authors of Goodlad, explains that determining what materials should be used in the teaching is a demanding educational decision for the teacher. I asked the participant teachers about how they understood the teaching resources listed in the syllabus.

> Me: - I see. The teaching materials in the syllabus. Do you see that as a requirement?
>
> Mr. Mgeni: -Yeah, it is requirements.
>
> (...)

Me: - And do you feel that this school is well enough equipped for you to teach geography?

Mr. Mgeni: -No, because we lack.. We are just facing different challenges. For example, myself in my department, I face the problem of books. Even reference books. I have only two to three books. That's the challenges.

Me: - And what does that do to your teaching?

Mr. Mgeni: - Myself I am a teacher I am just going to search, because you cannot only base on the two books. So myself as a teacher am going to search the reference books so to be updated.

Miss Ngoye shared this opinion:

Me: I see. So these learning resources that you are suppose to have. Do you see them as a suggestion by the syllabus or is it more of a requirement that you should have this?

Miss Ngoye: - We should have this

(…)

Me: What teaching materials do you feel is needed to tech in geography?

Miss Ngoye: - Books, for example. Even computers, there are some cds. I mean there are other materials that can be taught on the projector. It is easier for them. Instead of writing all of it on the board.

(…)

Me: - And do you feel that this school is well enough equipped to teach geography?

Miss Ngoye: - Not well.

Me: - Why?

Miss Ngoye: - There are computers, but not. There are no other resources like those geography cds. There is only one projector which is use all over the school. To other subjects. The computers are those in the laboratory, so it is limited.

Both Mr. Mgeni and Miss Ngoye perceive the materials in the formal curriculum as important and express a frustration about the lack of them. Their biggest concern is the lack of books, both to students and to teachers. Miss Ngoye elaborate that this has an effect on the teaching:

Miss Ngoye: - Like, maybe. I don't have books. I have to use the one copy which I have then to write the notes to the students. If I could have books I could direct them to you have to read this and this and this. You have to write the summary of this and this and this.

> Me: - I see. So you feel that the lack of materials forces you to write everything on the board?
>
> Miss Ngoye: - Yeah!

One of the more advanced teaching materials in the syllabus is *actual solar energy equipment*. I asked them about their interpretation of that:

> Me: - Yeah, but let's just say. For example, let's say page 5, on learning materials there are *actual solar energy equipment*. Is that something you have?
>
> Mr. Mgeni: - We don't have. Sometimes we use diagrams. We can use maybe internet, we can take some of the pictures.
>
> Me: - But how do you feel that the syllabus has these learning materials that you don't have?
>
> Mr. Mgeni: - Okay, you know that this is the challenges which I am facing as a teacher. Because the syllabus directs me to have *solar energy equipment,* but myself or in my school there is not this equipment. So sometimes I use my techniques, maybe go to the internet, maybe find the teachers then I show the students, this is solar equipment. But they did not see the real object. Only pictures.

Not surprisingly, Mr. Mgeni explains that the school does not have this kind of advanced teaching materials and creates an obvious gap between the formal curriculum and the reality. This gap is also widened with the suggestions of other teaching materials such as *real jewels.*

> Me: You have real jewels here?
>
> Miss Ngoye: - We don't have for the schools, maybe for the individual one.
>
> Me: I see. But all these resources are very expensive. How does that make you feel that the government is expecting you to have all these things?
>
> Miss Ngoye: - Hihi. What should I say. Hehe. What do I feel? Most of the requirements are written here, we don't have. And expect us to facilitate what is written here. So it is a weakness. And this are challenging teaching and learning environment.

Mr. Mgeni also sees a problematic relationship between the materials listed in the syllabus and what they actually have at the school:

> Sometimes it hinders teaching. It hinders teaching. Because sometimes you are suppose to have these teaching aids, but you don't have. So it means that teaching cannot be done effective.

Mr. Mgeni feels that the lack of resources is a problem. Miss Ngoye shares this opinion.

> Me: - Do you think that your teaching would be better if you had all those things?

Miss Ngoye: - Yes. If I have the teaching resources. First my, the power I am using will be reduced, then it will be easy for the students because they will understand. It will be easy for them to understand and the teaching will be made within a certain period of time.

It is clearly that the participant teachers are frustrated of the lack of materials that make the implementation of detailed syllabus hard.

5.2.3   The Operational Curricula

The lack of materials was also evident in the operational curricula. In my stay at the school, I did not observe teaching with any other materials than chalk. I did not see any materials lying around either. There were no charts and very few maps, or other materials listed frequently in the syllabus.

The school had some materials in the laboratory, but in terms of materials mentioned in the geography syllabus there was not much. The most problematic and urgent lack of materials was definitely the lack of books. I have previously depicted that the lack of books lead to teaching methods, such as lecturing and dictation, that consist of reproducing the content of the textbooks.

5.3   Cognitive Processes

Benjamin Blooms taxonomy of educational objectives is a tool that can be used to categorize the cognitive processes expressed in the different substantive domains. It was also used by Goodlad-associate Frances Klein (1979, p. 179) in dealing with cognitive processes in curriculum planning. So, how does the different domains relate to this taxonomy?

5.3.1   The Formal Curriculum

In order to map the formal curriculum, I have counted and analyzed the verbs of the objectives in the syllabus and categorized them in the taxonomy's six levels. This gives me an idea about what cognitive processes the syllabus emphasizes. Table 5.2 and 5.3 represent how each form emphasizes these cognitive processes.

Table 5.2 Categorizing of the cognitive processes using Blooms taxonomy - the darker the field, the darker the emphasis

	1. Remember	2. Understand	3. Apply	4. Analyze	5. Evaluate	6. Create	
Form I	58	26	1	5	1	0	91
Form II	69	59	0	9	1	0	138
Form III	36	44	2	3	7	1	93
Form IV	15	41	1	11	4	1	73

Table 5.3 Categorizing of the cognitive processes using the Blooms taxonomy - the darker the field, the darker the emphasis (in percentage)

	1. Remember	2. Understand	3. Apply	4. Analyze	5. Evaluate	6. Create	
Form I	63,7 %	28,6 %	1,1 %	5,5 %	1,1 %	0,0 %	100,0 %
Form II	50,0 %	42,8 %	0,0 %	6,5 %	0,7 %	0,0 %	100,0 %
Form III	38,7 %	47,3 %	2,2 %	3,2 %	7,5 %	1,1 %	100,0 %
Form IV	20,5 %	56,2 %	1,4 %	15,1 %	5,5 %	1,4 %	100,0 %

Form I is mostly dominated by basic cognitive processes (remembering). All the sub-topics have a majority of objectives on this level. The students should be able to define, identify, name, list and locate. There are also some more advanced, level 2-objectives, such as explain, summarize and clarify. This means that the syllabus expects the students to go further than just reproducing knowledge. Level 3, 4 and 5 is also represented in Form I, but in a much lesser extent. Level 6 is not apparent in Form I.

As the years progress, the emphasis shifts. In Form II, level 2 cognitive processes are almost just as common as level 1. It also includes more of level 4, *analyze*. In Form III, Level 2, is the most frequent cognitive process, all though there are still a lot of Level 1 objectives. Form III also includes level 5, evaluate, in a much further extent. In Form IV, there are not a lot of objectives at level 1 left and level 2 is dominant. It also emphasizes level 4 (analyze) more than the previous years.

As shown in table 5.2 and 5.3, the syllabus have a certain natural progression from basic reproducing in Form I to more understanding, analyzing and evaluation in the latter years. This cannot be accidental and the syllabus has been constructed to gradually introduce more

complex cognitive processes. What about the teachers? How do the teachers interpret the syllabus in regard to this?

5.3.2 The Perceived Curricula

They do not seem to take this into account. Mr. Mgeni is partly discussing this issue and comments that the learning should be a progression from simple to complex. However, this is in terms of topics and not cognitive processes:

> Mr. Mgeni: - Because. It is good because, for example, you cannot teach the students. There is something called learning from simple to complex. For example, today I am a geography teacher at form four. Maybe I just teach on the issues of map reading. It is impossible for form one to teach them concerning map reading. Form ones they are supposed to know the introduction of geography. Types of geography, importance of geography. Then has higher they go…
>
> Me: - The tougher the topic?
>
> Mr. Mgeni: - Yes.
>
> Me: But is there a difference between how they are taught in form one and form four?
>
> Mr. Mgeni: - No, the teaching methods is the same, but the topics are not.
>
> Me: - SO the topic is the one getting more difficult?
>
> Mr. Mgeni: - Yeah, they are learning from simple to complex.

Consequently, Mr. Mgeni interprets the syllabus to have this progression only when it comes to the topics.

During my fieldwork Form IV had a midterm test in geography. This midterm tests was made by the geography teachers at the school and gives a clue on what kind of cognitive processes the teachers emphasizes. The Form IV test consists of four sections. Section A is a multiple choice task. Firstly, the students answer some question with four alternatives, such as:

> iii. The feature resulting from wrinkling of the earth crust is
>
> a) block mountain
> b) Volcanic mountain
> c) Fold mountain
> d) Residual mountain

Then the students are supposed to match item from two different columns:

2. Match the items in column A with those in column B by writing the correct answer ageist its corresponding item in the box provide.

i.	Leeward side	A. Underground water source
ii.	Mixed farming	B. Farming system in which farmers
iii.	Ranch	cultivate certain place of land and leave it
iv.	Land real motion	to regain cultivate.
v.	Agro forest	C. Renewable energy
vi.	Heavy industry	D. The largest scale farming system
vii.	Meteoric water	E. Atmospheric water source
viii.	Coal, diesel and kerosene	F. The commercial livestock keeping
ix.	Great circle	
	[…and so on]	(Form IV Midterm test, September 2014)

These two assignments are remembering tasks. The students are not asked to write a single word, only remember what is what. This is the most basic cognitive process. The last assignment in Section A is "With the aid of diagram explain five feature formed by wave deposition". This task goes further and gives the students the chance to explain by drawing their own diagram.

Section B concerns "statistic, research, techniques, simple survey and leveling". Initially, the students are asked to define some terms. This could be seen as a more advanced kind of objectives; however that is only the case if the students would formulate their own definition. In my experience, both teachers and students are clear that the definition they are asking for is that of the textbook. By this standard this becomes a memorizing task as well. Many of the questions and task in Section B is very much alike. They ask for either a definition or a list of either demerits and merits of a certain phenomenon, or the characteristics of a phenomenon. These lists have been given to the students in the teaching. An example of this is question 4(b): "outline any four importance of statistics to the users". Miss Ngoye had written this list on the black board when I did my observations.

Importance of studying statistics in Geography:

- *It enables geographers to handle large set of data and summarize them*
- *It helps in making comparison on geographical facts. E.g. compare the amount of rainfalls and agriculture productivity*
- *Evaluates the collection of data to be easy and manageable*

(Observational Notes)

The test is asking for four of the points listed here, rendering the test a matter of memorizing. Klein (1979, pp.181-182) also explains that it may be a common phenomenon that the teacher think that he/she is helping the students to develop higher cognitive behaviors, but actually rarely call for anything higher than remembering. Nevertheless, the midterm test does not simply rely on the lowest level of cognitive processes. Section C is Map reading and photographic interpretation. The students are all handed a map from a part of Tanzania and given these tasks:

(a) Calculate the area Coved by the seasonal swamp

(b) Determine the Major Economic activity show in the area

(c) Explain Method used for showing relief

(d) Apart from Fishing activities name other economic activity taking place in the area

(e) In which hemisphere is the Mapped area located? Give evidence for tour answer

The students need to use other and more complex cognitive processes to be able to answer these tasks. They have to *interpret* (second level) and *analyze* (fourth level) the map and at the same time *apply* (third level) knowledge of calculating area to this map.

In the case of photographic interpretation, the students are given some questions about a given photo:

i.   What type of photograph is this?

ii.   Mention the features found at the foreground of the photograph

iii.   What activity is done

iv.   At what time was the photograph taken?

v.   What is importance of object in photograph taken?

vi.   What is importance of object in photo with its components to the farmers?

Many of the questions are poorly formulated and this could make it hard for the students to understand the questions. The question themselves are mostly related on the objects in the

photo. The student's job is to identify (second level) the different characteristics of the photograph.

5.3.3   The Operational Curricula

After doing a lot of observations in the classroom, my impression is that the teachers' practices are closely linked to the way the tests and national exams are made. Both Mr. Mgeni and Miss Ngoye focus on giving definitions and terms to students, meaning that the students are merely reproducing the knowledge given by the teachers. The teaching was filled with dictations, repetitions and chalk and talk, leading to a teaching practice that focuses on remembering.

Both Mr. Mgeni and Miss Ngoye give the students a lot of definitions to reproduce and memorize, as evident from my notes of a lesson with Miss Ngoye:

> She starts a dictation on the term statistics. Then she writes it on the board. Then it is dictation again. She says: *Just write. You are going to make notes.*
>
> Then she comes to *Two types of statistics*
>
>> *(i)   Inferential statistics*
>> *(ii)   Descrptive statistcs*
>
> Dictation of the definitions.
>
> Then she asks the students if they know what inferential and descriptive statistics is (she just gave them the definition). One student raises her hand and reads what she has just written down.

In this example, the students have to reproduce the text from the dictations. Then she asks the students to repeat it again, giving them a double repetition. This represents the case in many other observations, such as this one:

> She starts by asking what is the importance of statistics. (all though all the points are still on the board). The students read the long sentences straight from their book. They don't seem to understand it, just read the difficult sentences. (Observational notes)

Constantly focusing on remembering and reproducing creates monotonous operational curricula, but there are some attempts of applying other cognitive processes. In a lesson with Mr. Mgeni, he writes some assignments on the board:

> *1. What are the difference between photograph and map?*

2. *What are the similarities between photograph and map?*
3. *Differentiate between oblique photograph and aerial photograph.*
4. *What are the advantages and disadvantages of ground photograph?*
5. *Differentiate between high oblique photograph and low oblique photograph (Observational notes)*

In some of these questions, the students may need to use other cognitive processes than merely remembering and reproducing. Some of the questions ask the students to differentiate and compare different types of photograph. This is a part of the second cognitive process, understanding. Question number four, *What are the advantages and disadvantages of ground photograph?,* attempts to go even further. The students could be encouraged to evaluate (level5) the pros and cons with ground photograph. However, this is not how it was used. The teacher had already given the students the advantages and disadvantages with using ground photograph and consequently, this task was just another matter of reproducing what the teacher already had given them. This shows that there were some traces of more complex cognitive processes, but in general the teacher's were teaching at the first and lowest level of Blooms taxonomy.

Overall, the majority of the operational curricula was memorizing and reproducing of facts. This kind of learning are what Mayer (2001, p. 66) characterize at ROTE learning. The students have memorized the content and are able to remember definitions and important terms. However, they cannot apply this knowledge to solve a problem. They have the relevant knowledge, but lack the understanding of it.

5.4   Content Emphasis
The content emphasis is the priority of the different topics and indicates what is interpreted as the most important within the different substantive domains.

5.4.1   The Formal Curriculum
In order to comment any difference in the emphasis of content from the formal curriculum to the other forms of curricula, I need to identify how the syllabus arranges the content. In the last column of the content matrix, it is laid out the number of periods the teacher should ideally use for each of the sub-topics. Consequently, the content emphasis of the syllabus could easily be retrieved from these numbers.

In the introduction to the syllabus the number of periods is explained as following:

> An ideal instructional time has been shown on the seventh column of the content matrix. Instructional time shows a total number of periods set per topic. The time has been carefully calculated to enable the teaching as well as carrying on assessment in form of monthly test; midterm, terminal as well as annual examinations. The outcome of this exercise gives the following results.
>
> - Teaching and learning days per year are 194; and for Geography are 156 per each class
> - The number f periods per week for the subject are 4; and
> - The length of each period is 40 minutes.
>
> (MOEVT, 2010a, p. vii)

It is evident that the teacher should teach 156 periods at each form and that the rest of the periods are reserved for tests, midterms and such. In table 5.4, the structure of the content in the syllabus is presented. The table shows the different sub-topics and their ideal instructional time.

Table 5.4: The content emphasis of the syllabus. Note that number of periods in Application *of statistics* in form III is in parenthesis. In the syllabus the number of periods of this sub-topic was, of some reason, not given. But given the presumption that the form consist of 156 periods the right number of periods will be 20. The percentages have taken this into account.

Form I:	Number of periods	Percentage of the year
1. Concept of geography	8	5%
2. Solar system	56	36%
3. Major Features of the Earth's surface	32	21%
4. Weather	20	13%
5. Climate	14	9%
6. Map Work	26	17%
Total:	**156**	**100%**
Form II:		
1. Human Activities	3	2%
2. Agriculture	13	8%
3. Water management for Economic Development	30	19%
4. Sustainable use of Forest Resources	10	6%
5. Sustainable mining	22	14%
6. Tourism	17	11%
7. Manufacturing industry	25	16%
8. Sustainable use of power and energy resources	24	16%
9. Transport	12	8%
Total:	**157**	**100%**

Form III		
1. Structure of the Earth	16	10%
2 Forces that affect the earth	50	32%
3 Soil	20	13%
4. Elementary Survey and map	16	10%
5. Map reading and Map interpretation	20	13%
6. Photograph reading and interpretation	14	9%
7. Applications of statistics	(20)	13%
Total:	**136 (156)**	**100%**
Form IV		
1. Introduction to research	20	13%
2. Climate and natural Regions	40	26%
3. Human Population	30	19%
4. Settlement	16	10%
5. Environmental issues and management	50	32%
Total:	**156**	**100%**

There is a considerable difference in the emphasis of the sub-topics. In Form I, II and IV there is one sub-topic that has more than 30 % of the number of periods within that year, making it easy to determine the most important topics. That is *The solar system* (Form I), *Forces that affect the earth* (Form III) and *Environmental issues and management* (Form IV). What about the teachers? What do they interpret as the most important topics?

5.4.2   The Perceived Curricula

Klein (1979, p. 186) explains that the teacher always face the dilemma of emphasizing, organizing and arranging topics which often results in random or even whimsical choices. In order to identify the teachers' perception of the content emphasis, I asked Mr. Mgeni what he felt was the most important topics in Form IV:

> Okay, I think for form four the topic of map reading, research, survey and statistics is very very important for the students.

As evident from table 5.4, map reading, survey and statistics are nowhere to be found in Form IV, they are Form III topics. Why does Mr. Mgeni lay stress upon topics that are not even in the syllabus?

> Because, for example, you take the Form Four national examination. The topic of map reading, photograph, research, survey and statistics, it's having the higher marks. Even when you see on the classification, how they classify the marks, it is very very very.

Mr. Mgeni indicates that it is not the curriculum that decides the content of the teaching, it is the national exams. He interprets the national exams as the most important aspect when determining emphasis:

> Really. It means that, if you take the geography form four national exam, it is having the format. Automatically we go directly to the examination room. You bear in mind that there is photograph questions, there is map reading, there is survey, there is research, there is statistics. The problems is only you cannot know before the examination what the questions are. But you are going to first, map questions, photo question, research and statistics.

This was something Miss Ngoye also explained:

> The most important topics? Those topics that appears in the national examination. For example map normally occurs, the statistics also, physical geography. Because the structure of the national exam comes with physical geography, the map, statistics, survey, photography and yeah.

It is evident that the participant teachers have a strong predictability of content in the national exams. Both Mr. Mgeni and Miss Ngoye express that the topics of map, survey, statistic, and photography reading are extremely important and heavily emphasized in the teacher's implementation. But, how do the formal curriculum emphasis these topics? As seen in table 5.4, *photograph and interpretation* is given 14 periods in Form III. That is 9 % of the entire year. *Statistics* is given 13 % of Form III, while *Elementary survey and Map and Photograph interpretation and reading* are 23 % of Form III. Research is 13% of Form IV, meaning that these topics are far from the most important topics in the syllabus. This encourages the obvious question:

> Me: - But what about the other topics in the form four syllabus?
>
> Mr. Mgeni: - Okay, there are other topics like environmental issues, population and settlement, but they have minimum marks.
>
> Me: - Yeah, they have minimal marks, but do they take a lot of space in the syllabus?
>
> Mr. Mgeni: - Yeah.
>
> Me: - So do you feel that you must prioritize something?
>
> Mr. Mgeni: -Yeah, I must prioritize the students on the topics which are important, the max marks.

Mr. Mgeni explains yet again that the most important topics are those that give the highest marks on the national exams, meaning that the other topics are downgraded. This is also pointed out by Miss Ngoye:

> Me: - Yeah, but how does that effect your teaching? Are you emphasizing some topics over others?
>
> Miss Ngoye: -Yes, I should emphasize those who occur in the national examinations, but I teach also those who don't occur.
>
> Me: - But the same amount?
>
> Miss Ngoye: -No no.

This clearly indicates a significant gap between the formal curriculum and the teachers' interpretation and practice. Goodlad's second phenomenon of curriculum inquiry is the political-social phenomenon and involves processes leading to some interests being chosen over other (Goodlad, 1979, p. 30-31). The teachers relate their teaching more to the national exams than the actual syllabus, and the interest of passing the exams prevail over covering the curriculum. The power of defining the geography subject is placed outside the syllabus and gives the syllabus a problem of legitimacy.

The midterm test also emphasizes the topics of statistics, research, map and photograph reading. These are the topics with the highest marks. This is even though *statistics*, *Photograph reading* and *Map interpretation* are Form III topics. The topics belonging to Form IV, such as *Climate*, *Human population*, *Settlement* and *environmental issues and management*, are only partly mentioned at all. In the last section of the test the students are suppose to answer first on of these two questions:

> 9. Explain why it has been very difficult to avoid use of wood fuel for Long time in Tanzania on order to courante the environment
>
> 10. What are the benefits that have obtained from work done by the Tennessee Valley Authority /TVA) in Tennessee Valley?

And then one of these two:

> 11. What are importance of age- sex pyramids [populations structure] to any country.
>
> 12. Explain the Cannes of Soil fertility. In which ways can the soil fertility be concerned

Three out of five topics, representing 61% of the Form IV syllabus, is covered by these two questions. These two, quite poorly formulated, questions gives 20 marks, meanwhile *photograph interpretation* and *map reading* (which is Form III curriculum) gets 28 marks of the total of about 70 marks. There are also questions about the Form I topic *the solar system.* The Form IV topic of *Climate and natural Region* are not covered in any extent. This illustrates the difference between the prioritization of the teacher and the syllabus. Form III has their own midterm tests, giving the teachers no obvious reason to include it as a part of Form IV. I asked Mr. Mgeni about the making of this test and he responded that they tried to copy the previous exams so that the midterms prepared the students for the national exam. This means that the midterm test is a result of the national exams and not intended to test the curriculum, making the national exam the main criterion for choosing content. Criteria such as Wiggins and McTighe (1998) have listed have not been evident in choosing interpretation for the formal curriculum. The first criterion is "To what extent does the idea, topic or process represent a "big idea" having enduring value beyond the classroom?" (Wiggins & McTighe, 1998, p. 10). The content should be applicable to new situations by focusing on larger concepts. In the perceived curricula the teacher expresses little interest in this kind of thinking. The only importance is that the knowledge the students gets is "applicable" to the National exams.

The second criterion is "To what extent does the idea, topic or process reside at the heart of the discipline?" (Wiggins & McTighe, 1998, p. 11). Consequently, the teachers should focus on topics that the professionals in the discipline and subjects do. Many of the topics are well within this criterion, but not all. The very fact that photograph reading is included in a geography syllabus is at best questionable and the fact that this is a significant part of the national exams is even more alarming. By the standard of Wiggins and McTighe (1998) photograph reading is a topic very much on the outside of the heart of the discipline. The solar system is another borderline topic.

Wiggins and McTighe's third criterion is that the content should require uncoverage (1998, p. 11), meaning that teachers should select abstract topics that often harbor misconceptions. However, this is not the in the case perceived curricula, as the teacher rely on tangible topics that is easily memorized. This brings us to the last criterion: "To what extent does the idea, topic or process offer potential for engaging students?" (Wiggins & McTighe, 1998, p. 11). With such a focus memorizing, the students are not engage in any certain degree.

I was also eager to ask the participants their view on the extensive syllabus.

> Me: - But in your experience, do you feel is it possible to teach all the topics of Form III in one year?
>
> Miss Ngoye: - It is not possible. Sometimes, as I told you, I mean the weakness of this topics is that you are planning that you teach the map maybe within one week, but you find yourself that within three weeks its only map. So sometimes, because we are emphasizing some other topics, at the end of the year maybe one topic remaining.

Even with four periods a week there it is not enough time to teach all topics and this generates the question of how the lack of time affects the teaching.

> It affects the teaching methods because I have to do lecture method so that I can go fast comparing to if I use some other method, it means I will be doing for a long time. So sometimes I have to use one method of teaching, like of lecturing method, asking questions, giving them some works.

What Miss Ngoye explains is that there is a close link between the choices of methods and the extensive content of the syllabus. She expresses that she feel forced to use lecturing method to be able to cover the entire syllabus in a given year.

5.4.3   The Operational Curricula

It is difficult to evaluate what topics the teachers emphasize in their teaching after a fieldwork like this. I was only present during a small part of the academic year. What I can discuss is the reasons behind teaching the topics they did while I was there.

In a lesson with Mr. Mgeni it became apparent that what the teacher expressed in the interviews also was reflected in the teaching practice. The lesson concerned photography interpretation and he explained to the class why this topic is very important, as evident from my notes:

> He writes *photography interpretation* on the board and says that we are going to revise. He then starts talking about the national exam. He says that this is important and lists up five topics that will be on the exam: *map reading, survey, research, statistics,* and *photography interpretation.* He rings out the photography interpretation and says: *This is very very important. This will help you to perform well in geography.* It is clear that he is teaching for the test.

 Mr. Mgeni argues in the same way as he did in the interview. Formal curriculum does not emphasize the topic of photograph in any considerable extent and the reason why this topic is

so important is the fact that it is a considerable part of the national exam. This strengthen my impression that the national exams sets the agenda of the content emphasize.

5.5   The Gaps

I have investigated the implementation of the geography syllabus and identified how the different kind of curricula emerges through the implementation process. The formal curriculum is a detailed and extensive syllabus with a huge demand for both teaching materials and methods, expecting the teachers to teach using different cognitive processes, including a lot of LCP. The operational curricula are a lot less extensive. The teachers focus on the topics given in the national exams, they have a limited amount of materials and teach in just a few different teaching methods. My participant teachers also expressed a practice where the most of their teaching was based around the simplest cognitive process of Blooms taxonomy.

It is possible to a certain extent to identify the two gaps constructed in the project design. The syllabus has a lot of variation in methods, mostly focusing on discussion and some kind of group work. It is clear that these teaching methods are expected to be implemented. However, this is not how Mr. Mgeni perceives it. He feels that he needs to adapt his teaching method to his learners and that he needs to use the teaching methods he has learned in training. This creates an *interpretational gap* between Mr. Mgeni's perceived curriculum and the formal curriculum. Miss Ngoye expresses more fidelity to the teaching method in the syllabus, at least at the perceived curricula level, resulting in a smaller interpretational gap. The operational curricula are very different than both their perceived curricula and the formal curriculum. Both Mr. Mgeni and Miss Ngoye are almost exclusively using lecturing method and dictations. The teachers express the need to give the students the notes in order to pass the exams. This is best achieved by using lecturing method and dictations. This creates a *practice gap* and the teachers expressed more fidelity to the exams than to the syllabus.

The formal curriculum suggests a huge amount of teaching materials. In both the perceived curricula and the operational curricula the teachers demonstrated a huge lack of these listed materials. Consequently, this creates *interpretational* and *practice gaps*.

When it comes to the cognitive processes by Benjamin Bloom, the formal curriculum shows a natural progression from the simplest processes in the first forms to more complex processes in the latter forms. This progression is not a part of the teachers' interpretations, creating an

interpretational gap between the wanted natural progression in the formal curriculum and the emphasis of basic cognitive processes in the perceived curricula, an emphasis that is also apparent in the operational curricula.

It also seems that the content emphasis of the formal curriculum is not the same as what the teachers interpret as the most important topics, resulting in a significant *interpretational gap*. The syllabus has an extensive and detailed list of topics, in total 27 topics, meanwhile the teachers focus on the 4-5 topics that give the most marks on the national exam. These national exams have the same structure and content each year and make it easy for the teachers to predict what topics that appears on the exams. Also, the extent of the syllabus could be problem when it comes to the actual implementation. The teachers express that they do not have time to teach all topics and are then forced to choose and at the same time use only the most "effective" teaching methods such as lecturing and dictation.

Not surprisingly, these findings support my assumptions that there are huge gaps in the implementation from the formal curriculum issued by the MOEVT and the operational curricula of my participant teachers. Goodlad (1979) explains that this gap is unavoidable and expected. However, the size of the gaps is remarkable. Why are they so big? What creates these gaps?

6.0   Explaining the Gaps

In this chapter I will explain what generates these gaps. Then I will discuss the Cambridge as another option for a formal curriculum. Finally, I will discuss the findings in a national and international context.

6.1   Gap Generators

Through my research I have identified some factors contributing to these gaps, which I have named *gap generators.* I will explain these gap generators, but it is important that there might be other significant gap generators that this thesis does not discuss.

6.1.1   The National Exam

National exams are the first gap generator, which definitely influence implementation of the formal curriculum. The national exam, in effect, leads to a significant gap in the content emphasis of the formal and operational curricula. My material shows several examples of how the participant teachers emphasize topics given in the national exam to a much further extent than the syllabus does. Other topics, that are not included in the exam, receive very little attention in the teaching. A relevant conclusion is that the participant teachers implement the national exam more than they implement the syllabus. The national exams emphasize memorizing of facts and definitions using multiple choice questions and matching-items assignments (Vavrus & Bartlett, 2013, p. 100). Because the national exams put emphasis on the very basic cognitive processes, the participant teachers do the same. Vavrus and Bartlett (2013 p. 109) also points out that that exams uses a high-level and decontextualized vocabulary which evidently lead to the students to memorize these term without understanding them. An example of such a vocabulary can be found on the national exams in geography taken the fall of 2014:

> (ix) Which of the following features produced by ice action is the result of both erosional and depositional activities?
>
> A Arête   B Hanging Valley   C Erratic
>
> D Cirque   E Roche Mountonee

Such vocabulary creates a gap between the syllabus' focus on a natural progression of cognitive processes and the operational curricula's monotonous emphasis on memorizing these terms. Vavrus, Bartlett and Salema (2013, p. 15) point out that even though the syllabus

encourages more advanced teaching methods, it does not matter if the national exam continues to be knowledge-based. With reference to research on South African education, Vavrus et al. explain that the easiest way of changing the classroom practice (the operational curriculum) is by changing the structure and format of national examinations. But change it to what? Miss Ngoye Explains:

> Miss Ngoye: - I feel, it is not good. Because you to prepare the children for their future life. So what we insist in classes it is preparing the students for the exams only and not the life.

> Me: - And how could things be changed?

> Miss Ngoye: -First, the syllabus should be changed that those who are preparing this, they should prepare the topics which helps the students to be active in life first. Then the exam should be made just for knowing this. Are these students capable of what they have learned. So it should be just a measurements.

> Me: - So you want to change the syllabus and the exams?

> Miss Ngoye: - Yeah.

Miss Ngoye wants a closer link between the national exam and the syllabus. The syllabus is a result of many revisions, while the examinations represent an "old fashioned" model. National exams were introduced through the structural adjustment plans of the IMF in the 1980's and have since then not been object of major revisions (Vavrus & Bartlett, 2013, p. 95). Vavrus, et al. (2013, p. 15) give a possible explanation of why the exams have not been changed. The design of these multiple choice exams is a cost-efficient way of testing large amount of student in a short amount of time.

The headmaster of the private school tries to explain why there is no obvious collaboration between the exams and the syllabus:

> You understand the system? And then, They got so many departments, One is concerned with the exams, other is concerned with the syllabus, other is concerned with this thing. There is no coordination. And one thing is better than the other.

As the headmaster explains, the national exams are issued by NECTA, which is an independent governmental organization and not under the MOEVT. (Wedgewood, 2010, p. 844). NECTA and MOEVT have little connection to each other and represent the two ends of

the implementation process. MOEVT issues the formal curriculum (trough the TIE), but further on in the implementation process the influence from NECTA gradually increases. The two authorities are both in the societal domain, meaning they are in the decision-making process (Goodlad, 1979, p. 33). Nevertheless, it seems like they have two separate agendas and has not agreed on fundamental questions, such as the first question of Tyler (1949) : What educational purposes should the school seek to attain? In the current situation, MOEVT and NECTA are pulling in different directions, causing unnecessary big gaps in the implementation process. Only when a common agenda have been determined, can the agenda become criteria in which materials, content and instructional procedures that are chosen, (1949). Ironically, this common agenda may already exist, but not in an operational form. On NECTA's homepage it is explained that: "The holder of the CSEE qualification is expected to be able to apply skills of knowledge, comprehension, application, analysis, synthesis and evaluation in a broad range of activities" (NECTA, 2015). It is not difficult to recognize Blooms cognitive processes in this vision, but research has shown that the national exams do not test these processes (Vavrus & Bartlett, 2013). Fullan (1982) emphasize that diffuse goals could be a major problem for implementation. Klein (1979, p. 177) also explains that decisions made in different stages of implementation process often results in confusing guidance to the teachers in what to do in the classroom. The teachers are torn between an extensive, detailed syllabus and a knowledge-based and narrow national exam.

Another issue with the national exams as a gap generator is the limitations of the topics. The examinations office emphasizes the same topics every year and creates a predictability clearly expressed by my participant teachers. A Tanzanian teacher faces an overloaded syllabus which he/she are not able to cover and at the same time, the teacher knows what topics that are tested in the national exam. Consequently, the teacher will emphasize topics reoccurring in the national exams. The headmaster of the public school also points out that it is impossible to test four years of teaching with a three hour exam. The students have more than 600 periods of geography during the four years of O-level, and are supposed to cover a whole range of topics. In order to cope with this, the headmaster suggests more exams spread out through the years:

> No, that's the capacity of the exams require some number of questions which the questions cannot come to everything the students have learned. Maybe, what we can say instead of waiting for the exams the examination council they must consider the continuous assessment of the students. That is the big thing.

That how they can accommodate each and everything. […] When you finish this topic you do the test, you left it. […] Another month or half a year, you learn this one, you do the examination, you leave it. But it is different from Tanzania. You learn for four year and you are going to do the examination for one day. The examination cannot accommodate everything. That is the problem of our syllabus in Tanzania. And for Form VI you learn for two years. You are going to sit for one exam. You may learn many things and the exam will only come in this corner. They leave all of this one. So my suggestion, the curriculum should be revised. And considered most the continuous assessment done in school.

Continuous assessment could be effective in giving the national examinations a wider emphasis of content. This view on continuous assessment is also shared by Wiggins and McTighe (1998, p. 13). They emphasize that understanding is an ongoing process and a finishing exam will not take this into an account and they also point out that the teacher should first choose the content and then determine the assessment, not the other way around.

6.1.2   Lack of Materials

The lack of materials also generates a gap in the implementation process. The syllabus lists numerous materials to be used in teaching. Some of the materials are advanced materials and some are more basic. Given that the school does not have even the simplest of materials, the implementation of the syllabus becomes problematic, leading to a significant gap. By including advanced materials and expensive excursions, the formal syllabus is "out of tune" with the general situation of Tanzanian secondary schools, as expressed by Miss Ngoye:

> Yes, and the other things is, the syllabus encourages some teaching activities and teaching strategies, but there are no resources. As you have seen when I am teaching maybe you should have this and this and this, but no resources.

Fullan (1982, p. 59) explains that decisions made on political necessities or perceived needs without time for development could create lack of quality and unavailability of materials. The lack of materials also affects the method of teaching. When the students do not have textbooks, the teachers are forced to write a lot of information on the blackboard, creating a gap between the variety of methods in the syllabus and the focus on one method in the operational curricula.

6.1.3   Size of the Syllabus

The gap between the substantive domains is strengthened by the extent of the syllabus. The syllabus contains an extensive variety of topics which makes it hard for the teachers to cover the syllabus within the given time frame. In order to get through the entire syllabus, the participant teachers expressed that they were forced to lecture, leaving little room for other teaching methods. The irony in the large fidelity-based syllabus is that it is so detailed and strict that it is impossible to implement, meaning that the teachers must adapt the syllabus to the local circumstances. This creates a gap between the formal and operational curricula.

Even though the syllabus has been revised many times over the last years and one of the objectives with these revisions was to reduce an overloaded curriculum, Miss Ngoye still expresses that one of the biggest issues of implementing the syllabus is the extent of it. Covering a large number of topics in a very detailed manner, she feels that the syllabus is too extensive:

> As I have said there are so many topics, but the time given to fulfill those topics without having those resources it is quite different. So this is another challenge. So they provide the time. This topic should be done within this time. […] So their time is tight. It comes that at the end of the year you cannot complete the syllabus. So the time is very short comparing to the topics you have to cover.

Miss Ngoye suggests reducing the syllabus:

> Another change is, there are so many topics. So maybe if they could be reduced. So they learn little, but they understand and they will be capable all. Because sometimes a lot of topics at the end of the year it may be finished.

By reducing the extent of the syllabus, Miss Ngoye wants to focus on fewer topics. She feels that this will give the students a greater understanding of these topics, instead of having partial or lacking understanding of many topics. However, this opinion is not shared with the headmaster at the public school, who is content with the extent of the current syllabus.

> It actually needs to be small, but we can't make it smaller than how is it now. Because there are so many things to read. And actually it is divided into two again. Physical and map reading.

The debate of reducing the syllabus is more or less a debate on what geography is, and by that a debate of what the geography subject should embrace. This encourages questions like: What should be included in a geography subject and what should not? Is photograph reading and the

solar system geography? As mentioned earlier, to include these kinds of topics in a geography syllabus can be problematic. The solar system may be seen as more of a science topic, and it is hard to see relevance between geography and photographic analysis.

6.1.4 Teacher Training

Another significant gap generator is the teacher training. The syllabus is an extensive and detailed plan and it seems like the participant teachers do not have the necessary training required to implement this kind of syllabus. This is also expressed by Miss Ngoye who feels that they have not received good enough training in the implementation of the syllabus:

> Miss Ngoye: - Because, sometimes, when they bring a new syllabus they have to do seminars to the teachers. What is written in the syllabus.
>
> Me: - And you don't have that?
>
> Miss Ngoye: - It is not normal. Maybe few teachers can be called for the seminar. And when they came back they don't facilitate with other teachers. And sometimes not at all. So what I think is, when the syllabus is provided by the government teacher first are to be given some seminar.
>
> Me: - I see. So you are missing some guidance for how to use the syllabus?
>
> Miss Ngoye: - Even the methods. In the lesson plan there are methods which are written. The teacher should do this and this and this. But no seminar about it.

Bermeo, Kaunda and Ngarina (2013, p. 40) distinguish two different types of teacher training; pre-service training and in-service training. The pre-service training is the training, or education, the teacher accomplishes before starting to work as a teacher. In-service training is the training the teacher receives after he starts working. Miss Ngoye expresses dissatisfaction about the In-service training and points out that the government fails to offer training or seminars for the implementation of the syllabus.

There are also questions regarding the pre-service training. The teacher education is important in the process of determining the teacher practice, as reflected in my participants. They express that they teach using the methods they learned in their teacher education. The quality of the sub-Saharan teacher education is a concern of several researchers (Bermeo et al., 2013, p. 40). It is easy to point out that the teacher education is not good enough, but it is more difficult to point out what needs to be done. This is not the place to discuss the teacher

education in detail, but Bermeo et al.(2013, p. 44) points out that the teacher education needs to reflect the desired teacher practice. It does not matter if the syllabus emphasizes learner-centered methods like group work and discussion if the teacher is not properly trained. The change towards emphasizing LCP in teacher education has already started (Meena, 2009). Nevertheless, a change in the way teachers are taught will not necessarily give way to a whole new teacher practice. In 2009, Vavrus and her team attempted to implement learner-centered pedagogy to a teacher college in Tanzania. However, when the teacher students where to do their teacher training they were overwhelmed by the harsh reality. Overcrowded classroom and lack of materials made it hard to apply the methods they had learned in teacher training (Vavrus, 2009). The problem is complex and relates to a much deeper issue in Tanzanian education, the condition of the schools.

6.1.5 Other Possible Gap Generators?

The gap generators mentioned above are a few of the factors that affect the implementation and can create gaps from the formal to the operational curricula. However, the implementation process is a complex situation with many factors outside this thesis' realm, as Goodlad-associate Frances Klein (1979, p. 184-185) explains:

> A variety of factors affect this translation, assuming that there have been societal and institutional decisions. Among them are the skills, knowledge, and attitudes which the teacher possesses; the materials available for the use in refining and implementing the curriculum; the operational definition of significant elements in the subject matter, the role of the student in the process; formative and summative evaluation, procedures and instruments; the organizing centers provided to students; and many more.

One of these factors may be the *medium of instruction* in secondary schools. In Tanzania, the English language is the medium used in all subject except Swahili. Over the last decades, this has been an issue in much of the research on Tanzanian education. English is the third language for most students and teachers in Tanzanian secondary schools and this can represent a significant barrier in implementing the syllabus. Vavrus and Bartlett (2013, p. 98) explains:

> When students are tested on subject matter in a language in which they are fluent or at least highly proficient, then the exams are more likely to be assessing knowledge of core subject areas. Yet in Tanzania, the national examinations are written in English largely by and for people for whom English

is a second (or third) language.

I do not address this in my thesis, nevertheless it is still important to acknowledge the relevance to my findings and that this issue may be a contributing factor of the gaps in the implementation process.

Another factor that could be considered as a gap generator is the *classroom environment*. Overcrowded and noisy classrooms may be a contributing factor in generating a gap between the formal and operational curricula. For example; it is not hard to imagine that any form of group work in such a crowded environment is a lengthy and ineffective process. The lack of teaching materials could also be seen as a part of this factor.

Motivation of the teachers may also be seen as a gap generator. Their salaries are limited, they often have additional jobs and are frequently assigned additional roles and responsibilities at the schools. Take Mr. Mgeni for instance. He works at his family's farm, a long bus ride away, during the weekends and at the same time he is the head of maintenance at the school. Combining all this with being a full time teacher, contributes to a high workload for little pay. Vavrus and Salema (2013, pp. 86-88) argue that extra responsibilities influence the teaching profession by leaving teachers with less time to prepare lessons and rest. The fact that the participant teachers on several occasions came late to their classes or did not show at all, can also be associated with their motivation.

6.2   The Cambridge Curriculum - an Alternative to the National Syllabus?

In the discussion of the implementation of the national syllabus it is important to note that some private schools have discarded the national syllabus all together. As previously mentioned, I spent much time during my fieldwork in a private school which recently had changed from the national syllabus to Cambridge curriculum. The Cambridge curriculum is a course designed by CIE (Cambridge International Examination), a non-profit organization under the Cambridge University (CIE, 2015b). They offer programs from primary to pre-university years in 160 different countries and to more than 10 000 schools (CIE, 2015a). The curriculum I studied was the Cambridge IGCSE Geography, a two year syllabus for students from 14-16 years old.

I asked the headmaster of the private school about the decision behind changing to the Cambridge curriculum:

> Headmaster: - It was, see when you compare the national syllabus and the Cambridge syllabus, the national syllabus is very arcade, very obsolete. And too much emphasis on rote learning.
>
> Me: - I see, and you feel that the Cambridge syllabus is something different?
>
> Headmaster: - Totally something different. In the sense, when you look at Cambridge it starts at looking at the various faculties of the teaching. The ability of think, the ability to create. After understanding the basic concept in this thing, there is a lot of obligation in Cambridge and obligation you don't find anywhere in the NECTA system.

The headmaster argues that the Cambridge curriculum applies a large variety of Bloom's cognitive processes:

> There are certain lesson objectives and those objectives we take from the Blooms taxonomy. We start with knowledge, lower skills to higher skills. When you go through the lesson plan you are going to see what objectives, what level are the teachers teaching. So obviously we tell them that the level of teaching should be at a higher level.
>
> […]
>
> So what we do, the lesson we always insist that we are developing their skills. From lower skills to higher skills. Learning skills will tell them to see this is knowledge, this is application, up to analysis, synthesis and evaluation. And then we go for creativity. What level are you teaching? Are you just teaching at knowledge level? Just giving them some facts? If you teach at low lever children cannot ask questions which are based on analysis and synthesis. You take the whole class to that level. They can answer anything.

What the headmaster describes is exactly what is missing in the operational curricula in the governmental school, but does this description really reflect the operational curricula in his own school? Had the teachers' practice changed after swapping syllabi? Naturally the headmaster meant it did:

> The approach, the very curriculum, the schemes of work, the activities the children would have to do. All that put together it transforms the whole presentation of the subject. We have more books now, those books are latest, up to date books. Not written ten years ago. And then they are so many sites which are referenced in the curriculum itself. GO to this site, go to this site, get the information. It is al so good planned. We have the access, for example the internet access, the computer access. We monitor the sites, picking up information, working on projects.

However, after spending weeks at the private school I found that the teaching was in many ways just as monotonous as in the public school when it came to methods. The teachers relied heavily on dictations and lecturing. The picture on the cover of the thesis is taken in the private school. One day I was entering an empty classroom and the only thing written on the blackboard was *Dictation*. I felt that this illustrated much of the teachers' practice. The focus on these methods can be because these teachers worked at the school before they changed to Cambridge, but it may indicate that replacing the syllabus may not, in itself, radically change the practice.

The Cambridge curriculum has some clear differences form the national syllabus. First of all, the content is less extensive and detailed. In the two years the syllabus covers it has three topics; *Population and settlement*, *The natural environment* and *Economic development and the use of resources*. In the syllabus there is a list of objectives to be achieved within the two years. There are no descriptions of teaching methods or a given time frame.

The examinations in Cambridge are different from NECTA. The headmaster of the private school explained that the NECTA and the Cambridge examinations can have different effects on students:

> And you have also this experience that earlier we used to make the student appear both from the NECTA examination and the Cambridge. Many of the students were failed NECTA, but perform in Cambridge. What does that tell you?

Based on experience, the headmaster thinks that there are differences in how the students respond to these very different kinds of testing. The Cambridge examinations consist of continuous assessment with various tests. The students answer three different papers. Paper 1 is a1 hour and 45 minute test where the candidates answer three out of six questions. There are two questions from each topic and they are resource-based, involving problem solving and free response writing. Paper 2 is a 1 hour and 30 minute test where the students answer all questions. The paper is based "on testing interpretation and analysis of geographical information and on the application of graphical and other techniques" (University of Cambridge International Examinations, 2011). The last paper is a choice between a coursework which the teacher decides and an alternative to coursework (which is a series of

written tasks based on the three themes). The Cambridge examinations, seemingly, more thoroughly test the students compared to NECTA.

The Cambridge Curriculum is not a realistic option for the majority of secondary schools in Tanzania. First of all because most of the secondary schools in Tanzania are public and they do not have the opportunity to swap syllabi. Second of all, because CIE demands a certain standard in order to be approved as a Cambridge school that the majority of the secondary schools cannot fulfill. There are also other reasons why the Cambridge curriculum is not necessarily a good solution on every school. In my fieldwork I came across one school that did change to Cambridge, and after a year of trial changed back to the national syllabus. The owner of this school explained:

> However we have Tanzanian kids, Tanzanian teachers and our students will go onto universities mostly within Tanzania and so the boards met and discussed the costs and what are the schools goals given our stakeholders and we all agreed that NECTA was the right thing to continue with.

The advantages of having a local syllabus are not to be underestimated. A local syllabus gives the opportunity to adapt to the local context and make it more relevant for the students. After my fieldwork, my impression is that this was a weakness of the Cambridge curriculum. The international syllabus may lack relevance to a local context. One example was seen in a class with Mr. David. He was lecturing about traffic problems and his example of a congested city was Cambridge in the UK. This seemed odd given the fact that traffic problems are much greater and a major issue in Tanzania, especially in Dar es Salaam, and thus creates an unnecessary distance between theory and the reality. In the private school, the students also have the possibility of excluding Swahili as a subject and choose French instead. This may be interpreted as a way of neglecting local knowledge and it points out the potential strength of a national syllabus. A local syllabus can give the students local knowledge, especially in subjects like geography, civics and history where the local context is more relevant than for example mathematics.

'

6.3   The Gaps in a National Context

My research is a case study of mainly one school, and by that my findings cannot necessarily be generalized to a bigger national context. For instance, the school was in an urban environment in a country with the majority of the population living in rural areas (CIA World Factbook, 2014). To include secondary schools located in a rural environment would be a necessity if the aim was to comment on the Tanzanian secondary education system as a whole.

Fangen (2010 p. 250) explains that the more a researcher can argue for his findings with relevant comparative data and theoretical evaluations, the more probability for a probable interpretation. Jacobsen (2005, p.214) talks about intersubjectivity rather than " a truth" and explain that the more people who degree on a conclusion, the more valid it is. In this section I discuss my findings to other relevant research on Tanzania. I also discuss whether my participants and informants recognize my findings and relate them to their own impressions. In both instances, I am seeking for intersubjectivity.

The identification of significant gaps between the syllabus and the teachers' practice is supported by Frances Vavrus' research (2009). She studied how teacher students implemented LCP and found that the formal curriculum's focus on LCP and inquiry-based method conflicted with the reality the students faced in the classroom. The classrooms were overcrowded and the schools lacked teaching and learning resources.(Bermeo et al., 2013, p. 44). Vavrus (2009) points out that the syllabus encourage to more LCP, meaning a higher level of cognitive processes, however when faced with the reality, the teacher students did not manage to implement LCP. She found that this leads to a teaching practice involving only rote, memorizing and recalling. However, not all of my informants share the belief that the syllabus tries to encourage new teaching methods. Sofia A. Okash, a regional chair person of TAMONGSCO, says that the syllabus encourages teachers to an old-fashioned teaching. "The teachers just write on the board and then they say say say". She points out that the teaching methods used by the teachers are only "chalk and talk" and that "The students just forget what they have learned because of the method". This impression is also shared by the headmaster of the private school who chose to abandon the governmental syllabus a couple of years ago:

> Seeing the national curriculum. What the teacher had to do the most was teacher centered not learning
> centered. Sooo much information, huge burden on the children. And that they have to know every word

from the teacher to the child. There are no activities, there were no goals, no group work and nothing like that. It was given only to the teacher. You perform! You stand there and talk and scribble on the board! Without teaching aids.

Even though Vavrus and my informants express differing conceptualizations of what the formal curriculum encourage, the effects of the teaching is the same. The operational curricula consist of the simplest cognitive processes and do not challenge the students to higher level of Blooms taxonomy.

My understanding of the national exam as an important factor in determining content and methods in the operational curricula is also shared with Vavrus and Barlett (2013). Vavrus and her research partners explain how the Form IV national exams (CSEE) affect the teaching:

> The CSEE prioritize items that can be graded in a standardized way and may be considered more valid items than items that require the persons marking exams to interpret students' work. Yet the predominance of multiple choice and matching items that require definitions or the recall of decontextualized knowledge means that the drilling of facts, rather than critical thinking becomes the pedagogy of preference for teachers who want to improve their students' performance on the CSEE and similar high-stakes exams. (Vavrus & Bartlett, 2013, p. 101)

This point is shared with the headmaster at the private school who claims that evaluation system is not up to date.

> It is because the syllabus it is so heavy. All facts, unnecessary facts. See, the basic starts from here. What is education? Education is to renew the mind. Bring the intellect of the child. It is not to beat it into the child (hit himself in the hand). Find the spark. That spark will carry him wherever he wants to. Give them this system and they will not spark. Only ash and ash. The evaluation system is also not up to date.

The findings in my thesis are not widely different from other researcher's findings. The fact that there is intersubjectivity between me, my informants and earlier research on the matter, indicates relevance to a general situation of Tanzania's education system.

6.4   My Findings in a Global Setting

6.4.1   Teaching for the Test

My findings describe a Tanzanian secondary school where the operational curricula revolve around passing the national exams. This is a well known phenomenon often called "teaching for the test" and is by far an issue concerning Tanzania alone. The last 15-20 years international tests like PISA and TIMMS have given countries around the world a wake-up-call. By means of these tests, it is possible to compare countries' primary and secondary education. PISA testing has been met with profound critique, but in this context it is most important to recognize the influence these test have on national educational systems. Sjøberg (2014, p.213) explains that OECD, which is responsible for PISA, is regarded as a neutral and objective institution and exercise "soft power". They have no formal political power, but influence decisions with their statistics and report. Many governmental leaders have taken measures to improve their respective schools systems score and in just a few years, these tests have become extremely important in the educational agenda of many countries. Japan is an example of how the PISA test has been of major importance in syllabus revision. The Japanese school in the 1990's where characterized as "cram education" which focused on rote memorization of huge quantity of facts. In the first PISA test in 2000, Japan scored very high in all three subjects. In about the same time, Japanese authorities began changing this "cram education" to a more pressure-free education in an attempt to give the students better skills in applying knowledge and expressing their own opinion. This 10 year initiative came to an abrupt end when the PISA results concluded that Japan was dropping on the international rankings. This came as a "PISA shock" and in 2010 the Japan went "back to basics" and increased the size of textbooks, and focusing more on rote learning (Foster, 2010).

This obsession of PISA tests is a global phenomenon. Sjøberg (2014, p. 215) explains similar PISA-"panic" in countries like USA, Australia, United Kingdom and Norway. He argues that the PISA project has nothing to do with pedagogy, but with politics (Sjøberg, 2014, p. 198). OECD has become a huge actor in the Norwegian education agenda. PISA tests only mathematics, reading and science. This means subjects such like geography, history, civics, literature, music, esthetical subjects, ethics are not included. (Sjøberg, 2014, p. 210). In 2014 Simon Malkenes expressed concerns that the continuing national tests and PISA were forming the educational agenda in Norway. Malkenes explains that much of the national education

policy revolves around scoring as high as possible on such tests (Malkenes, 2015). He also link this emphasis on testing with the "No child Left behind"- policy in USA. Vavrus et al. (2013, p. 6) explains that the reform launched by President Bush in 2002 was a "back to basic-reform" which heavily focused on testing with the consequent that the passing and scoring of tests became a high-priority issue.

Evidently, emphasizing test-scores is an international phenomenon. The problem in a Tanzanian context is that even though the operational curricula revolve around preparing the students to the national exam, the majority of the students still do not pass. In 2012 (the last statistics made available) 71,5 % of the students failed their CSEE geography exam (MOEVT, 2013), as consequence of an operational curricula that neither enforce the formal curriculum nor helps the students pass the exam.

6.4.2   A Detailed Curriculum

Debates around too detailed and extensive curricula are also found outside Tanzania. Imsen (2009, pp. 198-201) explains that in 1939 the Norwegian government issued an extensive syllabus that included a detailed description of content and the given methods of instruction. It was funded in a fidelity-tradition, where it is laid out to every detail how and what the teachers are supposed to teach. This curriculum was in service until the late 1960's when it was replaced by a more adaptation-based curriculum, which gave the teachers the possibilities to make their own choices. However, the teachers did not use this opportunity. They felt that the curriculum could not be realized and implemented because they lacked the resources and competence to use the freedom they were given. Imsen (2009, pp. 198-201) talks about the feasibility of the curriculum and recognize that the syllabus was not feasible.

Imsen (2009, p. 200) explains that the transition from fidelity to adaptation needs to be seen in connection to the development of teachers' professional competence. As the teacher-education in Norway has improved, the need for a close guidance from the government has decreased. The teacher is equipped with more extensive repertoire of methods, resulting in decreasing need for detailed curriculum. In relation to a Tanzanian context, the insufficient quality of the teacher-education contributes educate teachers that may not be ready for anything else than a fidelity-based curriculum.

7.0 Conclusion

In this thesis I have shed light on the implementation of the geography syllabus and depicted realities that do not necessarily correspond to the formal curriculum. In order to arrive at some concluding points I will return to the thesis' research questions, starting with the secondary questions and finally discuss the main research question.

Are there gaps between the formal curriculum (national syllabus) and the teachers' perceived and operational curricula?

Yes, there are significant gaps occurring along the implementation process. Goodlad (1979, p. 355) explains that this is to be expected in any curriculum inquiry. Nevertheless, in a Tanzanian context the size of the gaps is substantial, and the formal curriculum is hard to recognize in the operational curricula of my participant teachers. The formal curriculum describes a variety of methods and topics, a natural progression of cognitive possesses and a detailed list of suggested teaching materials. All in all, it is a detailed syllabus. The participant teachers do not perceive the list of materials and the progression of cognitive processes as important for implementation; meanwhile they also put emphasis on different and fewer topics. Consequently, a considerable *interpretational gap* emerges between the formal and perceived curricula on these matters. In relation to the teaching methods, the participant teachers perceive some of the methods in the same way as the syllabus. Both of the teachers feel that excursions are an important part of their teaching and Miss Ngoye also argues that the syllabus ought to decide her teaching methods. Mr. Mgeni does not feel the same and explain that the methods of the syllabus are too advanced for his students. However when it comes to the operational curricula, both of the participant teachers exercise a monotonous practice with emphasis on lecturing and dictation, resulting in a *practice gap*. They also exercise operational curricula with limited materials, focus on the basic cognitive processes and emphasis on the same topics as in the perceived curricula. Evidently, the operational curricula are not much different from the perceived curricula, resulting in a much smaller practice gap. In other words, the gap between the extensive, learner-centered and fidelity-based syllabus and the small, teacher-centered and adaption-based operational curricula is large and foremost generated in the interpretational gap.

What creates these gaps?

I have also identified the major factors generating them. I have called these factors *gap generators.* Firstly, the most important gap generator is the national exams. The national exams contribute to an unnecessary gap because it does not test the students in their formal curriculum. NECTA, which makes the exam, is an independent organization with a seemingly different agenda than MOEVT. Much of the everyday teaching is focused on passing the CSEE exam at the end of Form IV, making the exam guiding in the emphasis of content, teaching methods and cognitive processes in the perceived and operational curricula. The reoccurrence of the same topics each year in the national exams make it convenient for the participant teachers to lay most of their focus on these few topics and simultaneously neglect other topics. As Bartlett and Vavrus (2013) explains, the national exams, focus on cognitive processes at a low level of Blooms taxonomy (Anderson et al., 2001), and as my research has depicted, so do the teachers. They emphasize memorizing facts, and as an extension of that they rely on the teacher-centered methods such as lecturing and dictation. Consequently, the participant teachers are practicing an international well-known phenomenon often called "teaching for the test".

Secondly, the lack of materials is also a gap generator. The unrealistic and advanced list of materials is impossible to implement for my participant teachers. As most of the governmental school in Tanzania, they do not have the whole range of maps, charts and photographs required in the syllabus and they definitely do not have advanced materials such as real jewels, stevenson screens and seismographs.

Thirdly, the size of the syllabus also generates gaps. Including so many topics in such a detailed manner, the formal curriculum is considerably overloaded and my participant teachers express certain frustration of not being able to cover all the topics. They are forced to choose and consequently they emphasize the topics that occur in the national exams. Overloading the syllabus also has consequences in the choice of teaching methods. The teachers feel that in order to cover as much as the curriculum as possible, they cannot afford to spend time on time-consuming learner-centered methods like group work, research, discussions and so on.

Finally, the qualifications of the teachers can also be seen as gap generator. In my research, I experienced that the teachers were unfamiliar with the teaching methods and cognitive

processes of the formal curriculum and they expressed that they lack training in implementing the syllabus.

These four gap generators depicted above are important in revealing why the formal curriculum appears fundamentally different from the perceived and operational curricula. Nevertheless, it is by far the only generators that create gaps in the process of translating the formal curriculum into a tangible practice. The English language as the medium of instruction, the classroom environment and the teachers' motivation are examples of other possible gap generators that this thesis does not discuss further.

What are the effects of the implementation of the formal curriculum on the teaching practice (operational curricula)?

The formal curriculum is a curriculum that encourages fidelity of use. Fidelity-curricula are, in its most extreme cases, supposed to be " teacher-proof", meaning that the syllabus is so detailed that there is no room for misinterpretations (Marsh, 2009). Ironically, the fidelity-based formal curriculum leads to adaptation-based operational curricula. The teachers are not able to implement the syllabus, because it is too detailed, advanced and demanding. Imsen (2009, p. 201) explains that feasibility is extremely important for the teacher when implementing curriculum and by that standard, the Tanzanian geography syllabus can be seen as nearly impossible to follow. The syllabus needs to be adapted to local realities. The consequence of this adaptation is that the operational curricula are filled with teacher-centered methods, as the participant teachers are forced to use these methods if they are to cover as much of the syllabus as possible.

To what degree is the geography syllabus realized and implemented at the secondary level in Tanzania?

This is my main research question and, as evidently documented above, the syllabus is to a limited degree realized and implemented in the perceived and operational curricula of my participant teachers. There are factors that generate considerable gaps through the implementation process. Content emphasis, teaching materials, cognitive processes and teaching methods differs from the intentions in the formal curriculum. The geography syllabus fails to work as a guiding tool because the conflicting national examinations controls a significant part of the teachers' choices.

In the project design, I created a model for the implementation process. After having depicted the gaps and circumstances around them, the following modified model describes my findings.
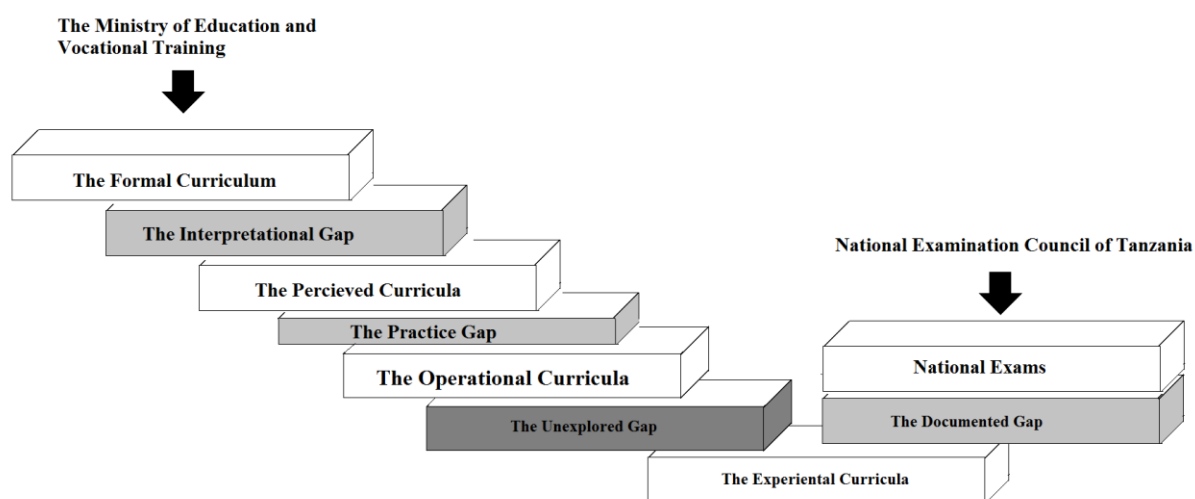
Figure 7.1: The modified model of the implementation process

As evident of figure 7.1, the implementation process is more complex than first thought. The **MOEVT** issues the **formal curriculum** and the **NECTA** issues the **national exams.** Through the implementation of the syllabus the different substantive domains starts to orientate more and more to the examinations than to the syllabus, represented with the displacement of the **perceived** and **operational curricula**. As a consequence of this, the operational curricula are not implementing the formal curriculum, but ironically they also do not give students good enough guidance to pass the exam. With 71,5 % failing their geography national exam in 2012 (MOEVT, 2013), **the documented gap** represents a chasm between the students' performance and the intended learning outcome. This gap was in the first model a gap between the formal curriculum and the experiential curricula. In the revised model this gap has been placed between the national exams and the experiential curricula. Even though the implementation process shifts towards the national exam, the results of the tests have been poor. Consequently, the operational curricula are put in an intermediate position where it fails in both implementing the syllabus and helping students to pass their exam. This is

problematic. Nevertheless, the national exams are not solely to blame for the mismatch between the formal curriculum and the rest of the implementation process. The lack of materials, teacher training and the size of the syllabus also generates gaps between the substantive domains, especially in the **interpretational gap**. This is illustrated by a bigger interpretational gap than **practice gap** in the model.

There is also a darker **unexplored gap** between the operational curricula and the **experiential curricula**. In the initial model this was just an empty space. But in order to further address that the actual teacher practice is not necessarily the same as what the students experience, I have included this gap in the model. For methodological reasons, this study does not include research on this gap, but that does not render it either inexistent or insignificant.

Depicting parts of this complex structure leads me to conclude that the ideal of the syllabus is rather "detached" from realities experienced by teachers and students. This is an alarming and problematic issue for Tanzanian educational development and if the authorities are aiming to improve the quality of the secondary education, this should be addressed. Many of the problems pointed out in this thesis have also been previously addressed. In 2004 the SEDP evaluated the education system and came to a conclusion that the curriculum was overloaded, the teachers had poor supply of materials and the teacher training was not sufficient. Ten years later and despite many strategies for improvement, these problems are still evident. As Vavrus (2013, p. 24) points out, the Tanzanian government, as many other countries, is strong on policy development, but weak on policy implementation. She emphasizes that even though the syllabi have changed to incorporate learner-centered methods, the teacher training has not. I have also explained the same problem with the national exams; when the operational curricula are so closely linked to the national exams, it is naive to believe that a syllabus revision alone will ensure a reduced gap between the formal and operational curricula. NECTA, MOEVT, the teachers' colleges, school leaders, teachers and everyone else must gather around some common goals. Now, in 2015 the SEDP II (2010-2015) is coming to its end at this can be a golden opportunity to address this issue and bridge the gaps between ideal and realities.

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9.0 Appendices

Appendix 1: Information text to public school

To the staff at xxxxxxxxxxxxxxxxx

We, Anders Haugen and Øyvind Mellingen, are two teacher students from Bergen University College who are planning on writing our masters degree on topics concerning the subjects geography and civics in Tanzanian secondary education. During the fall of 2014, we will spend around two months in Tanzania doing field work and collecting data for our research. As our university college and Your school already cooperate in several diffente ways, we hope that.

Here is a short presentation of our projects and what we hope You can help us arrange at ████████████ during our stay in ████████ :

Øyvind Mellingen´s research

I am researching how the geography syllabus are implemented on different schools. I would therefore like to observere and interview 1-2 geography teachers at the secondary level for a period of 3-4 weeks. I would also like to take part of the day to day life at the school and follow these two teachers when they teach geography and maybe be their teacher's assistant. I am also interested in teaching some classes myself. Preferbly the same classes as the geography teachers (but not teach in geography, mabye civics?). Could this be arranged?

Anders Haugen´s research

What tanzanian secondary education teach about "the others" is the topic of my masters degree. A part of my work is to identify who "the others" are in Tanzania, but my main focus is to look at how Europe an europeans are represented. If I could be able to teach for 2-3 weeks in a class (civics and geography), that would be great! Also, I would like to follow a geography and civics teacher in the same period of time, observe His or Her classes, and discuss different issues concerning "the others" in geography and civics.

We will arrive ████████ early September, and plan on doing the majority of our field work in ████████ between September 15th and October 17th. If You have any questions, do not hesitate to contact us:

- Øyvind Mellingen: okm2@hotmail.com
- Anders Haugen: ████████████████

Asante sana!
Best regards,
Øyvind Mellingen and **Anders Haugen**
Bergen University College 2014
Bergen, Norway

Appendix 2: Information text to private school

To ████████████████████

Greetings!
We are two teacher students from Bergen University College in Norway who are writing our masters degree. We are studying aspects of Tanzanian secondary education. It would be interesting for us to come to your school and be a part of the schools everyday life. We would be extremely thankful if you would help us in our study and give us access to your school. Our names are Øyvind Melingen and Julie Gaarder, and we arrive in ████████ in early September and plan to do the majority of our field work between September 15th and October 17th this coming fall. These are the generals of our project:

Øyvind Mellingen´s research:
I am researching how the geography syllabus are implemented on different schools. I would therefore like to observer and interview 1-2 geography teachers at the secondary level for a period of 3-4 weeks. I would also like to take part of the day to day life at the school and follow these two teachers when they teach geography and maybe be their teacher's assistant. I am also interested in teaching some classes myself. Preferably the same classes as the geography teachers (but not teach in geography, maybe civics?). Could this be arranged?

Julie Gaarder´s research:
My overall subject is the increase of private secondary schools in Tanzania. I would therefore like to talk to the founders and also the head master regarding the ideology, motivation and everyday life at the school. I would also like to talk to some of the teachers about their reasons for choosing to work at a private school. Additionally I would like to observe some classes if possible.
We hope that your school could help us in our research and look forward to hear from you. If you have any questions, please do not hesitate to contact us at okm2@hotmail.com.
We hope to hear from you soon, and hopefully exchange some e-mails in the coming months.

Asante sana!
Sincerly
Øyvind Mellingen and **Julie Gaarder**
Bergen University College 2014
Bergen, Norway

Appendix 3: Revised informational text

Information about my stay at your school

My name is Øyvind K. Mellingen from Bergen University College. Thank you very much for letting me be a part of your school. My intention with staying at your school is to learn from you and especially get to know how you teach geography. It would be a great learning experience for me to observe and interview geography teachers at the school the next coming weeks.

With this informational sheet I would like to inform you to some details concerning my project. The working title is "From Ideals to Realities" and I am interested to learn how geography is taught according to the syllabus. It would be a great asset for me to observe and interview two or three geography teachers at your school and at the same time be a part of the schools everyday life in the period I am here.

All the data I will retrieve will be confidential and anonymous. No persons could be recognized or identified and any possible recordings will be deleted. The school will be given another name in the final paper and it would be impossible to identify the school. It is of course voluntary to participate and the individual teacher could say no, but I hope for your continuing cooperation. The project will be finished in May 2015 and a copy will be send to you if requested.

 If you have any questions after my visit has ended, please do not hesitate contact me at ▮▮▮▮▮▮▮ or contact my Supervisor at Bergen University College Vibeke Vågenes at ▮▮▮▮▮▮▮.

A letter of recommendation will be handed to you in addition to this informational sheet.

Yours sincerely

Øyvind K. Mellingen

Appendix 4: Interview guide for teachers in public school

Introducing myself and the project

- *Here to learn from you*
- *Cant be identified*

Introduction

- How long have you been a teacher?
- How long have you thought at your current school?
- In addition to geography, what other subjects do you teach/taught?
- Where did you study to become a teacher and what is your education?
- Do you enjoy teaching geography?

Introducing question:

- Can you explain to me what the syllabus is?
- How does it work?
- What is its purpose?
- Who is responsible for the syllabus?
- Is it necessary to have a syllabus? Why?
- Is the syllabus important for you?

Planning

- Do you normally have time to plan a class?
- In that case, how much time do you think you think you spend planning?
- How do you plan the class?
- Do you use the syllabus in your planning? How much?
- Is the syllabus important when planning a class?
- Do you have your own copy?

Content

- What do you feel is most important topics to teach in geography?
- Why?
- How do you feel that the syllabus covers those topics?
- Is geography important for Tanzanian students to learn? Why?
- What you feel is the main purpose of geography?
- Is that consistent with the syllabus?
- (Give him a list of all topics) – What topics do you consider the most important and what is least important? And why?
- In your experience, it is possible to teach all the topics in the syllabus in one year?
- If not, what do you exclude?

Learning strategies

- In the syllabus (show) the fourth column is named learning strategies. What does that mean?
- Why do you think the syllabus need do dictate what learning strategies to use?
- Does the syllabus decide how you are going to teach?
- How do you feel that the syllabus think students learn best?
- How do you feel a student learn best?
- The syllabus uses discussion a lot (show example). What does the syllabus mean by discussion? How do you use discussion in the classroom?
- Brainstorming (show example) is also frequently used? What is that? How do you use brainstorming?
- Using the syllabus, how would you plan a class that would teach point 2 page 94 (show) (Mode of formation of reach type of rock) .
- Is it common to take students out from the classroom? (why)
- In syllabus the learnings strategies always starts with "the teacher are to guide students…" What does that really mean? How do you guide a student?
- In the Syllabus (p47-show him) on the subject of water importance it is suggested to use role play to demonstrate the various uses of water. What does that mean? How would you have done that?

- The syllabus often wants the teacher to devide the class into groups (show example). Why do you think that the syllabus wants to use groups? What is the advandatges and disadvantages with using groups? D you use groups in your teaching?

Materials

- What teaching materials do you feel is needed to teach in geography?
- Does the school have all these materials? Do you feel the school is well enough equipped for you to teach geography? Why/Why not?
- The teaching materials listed in the syllabus. Do you see those as a requirement or as suggestions?
- Is there a difference between the materials that are listed in the syllabus and what you have at the school?
- Why do you think that is?
- What do you (And other geography teachers) do instead to replace the materials?
- Do you think your teaching would have been better if you had those materials? Why?
- In the syllabus (Show form 1 page 5) a required teaching materials is actual solar energy equipment. Do you have that? How do you feel that this is a listed teaching material?
- In the syllabus (show page 25) the teacher are to involve a meteroligist to come to the classroom? Is this something you can do? Why do think this is listed?
- On page 69 (show) the teaching materials listed include **real jewels**. What do you think about that?

Closing question:

- What you think about the syllabus?
- Is there anything you would like to have been different in the syllabus?
- How do you feel the syllabus helps you in teaching geography?
- Can you see any disadvantages or advantages of having a syllabus?
- Do you belive the authors of the syllabus are familiar with the general situation in Tanzanian schools?

- In your experience, what are the major differences between teaching geography in public and private schools?
- Is there anything you would like to add?

Appendix 5: Interview guide for teachers in private school

Introducing myself and the project

- *Here to learn from you*
- *Cant be identified*

Introduction

- How long have you been a teacher?
- How long have you thought at your current school?
- In addition to geography, what other subjects do you teach/taught?
- Where did you study to become a teacher and what is your education?
- Do you enjoy teaching geography?

Introducing question:

- Can you explain to me what the syllabus is?
- Can you explain to me how it work?
- What is its purpose?
- Who is responsible for the syllabus?
- Is it necessary to have a syllabus? Why?
- Why do you think your have chosen this syllabus
- Is the syllabus important for you?

Planning

- Do you normally have time to plan a class
- In that case, how much time do you think you think you spend planning?
- How do you plan the class?
- Do you use the syllabus in your planning? How much?
- Is the syllabus important when planning a class? How closely are you linked to the syllabus?
- Do you have your own copy?

Content

- What do you feel is most important topics to teach in geography?

- Why?

- How do you feel that the syllabus covers those topics?

- Is geography important for Tanzanian students to learn? Why?

- What you feel is the main purpose of geography?

- Is that consistent with the syllabus?

- (Give him a list of all topics) – What topics do you consider the most important and what is least important? And why?

- In your experience, it is possible to teach all the topics in the syllabus in one year?

- If not, what do you exclude?

Learning strategies

- How do you feel a student learn best?

- How do you feel that the syllabus think students learn best?

- Does the syllabus decide how you are going to teach and what strategies to use? Why?

- If not, why do think that? Does this give you some kind freedom?

- What kind of learning strategies do you use in your teaching? Why?

- What about discussion? How? Why?

- Do you often divide the class into groups? How? Why?

- Is it common to take students out from the classroom? Why?

- Can you explain the "guidance on the themes"? What is the difference between that and the curriculum content? Do you often use the guidance to help you in your teaching?

- Lets take a goal from the syllabus: "Assess the benefits and disadvantages of tourism to receiving areas". How would you have approached this? What teaching strategy would you use?

- Lets take another one. Describe the growth of the worlds population and associated problems and show an understanding of the cause and consequences of over-population ad under-population. How would you have approached this? What teaching strategy would you use?

Materials

- What teaching materials do you feel is needed to teach in geography?

- Does the school have all these material? Do you feel the school is well enough equipped for you to teach geography? Why/Why not?
- Does the syllabus decide what kind of materials you must use in your teaching? Why/Why not? Why do you think that?

Closing question:

- What you think about the syllabus?
- Do you feel the syllabus is adapted to a Tanzanian context?
- Is there anything you would like to have been different in the syllabus?
- How do you feel the syllabus helps you in teaching geography?
- Can you see any disadvantages or advantages of having a syllabus?
- In your experience, what are the major differences between teaching geography in public and private schools?
- Why do you think your school has chosen this syllabus and not the governmental syllabus?
- Is there anything you would like to add?

Appendix 6: Interview guide for the geo teacher at DUCE

- What is your general impression of the geography syllabus?
    - Strengths/ weaknesses
    - How do you feel the general impression among teacher in Tanzania is to the syllabus?
    - What do you feel should be the objective/goal for the government in making a syllabus?
    - Is there something you would have like to be different?

- Is there any way to make changes in the syllabus? Is the NECTA willing to change it?
    - If that is possible, how?

- Is the syllabus important for the teacher?
    - Why/how?

- Does the syllabus, in any way, decide how the teachers are going to teach?
    - How/Why?

- The curriculum makers of NECTA, do you feel that they are familiar to the general situation of public schools in Tanzania?
    - And haven they taken it into account when making the syllabus?

- How is the teacher students trained to use the syllabus?
    - Has the training changed over time?

- Some schools have chosen different curriculum than the NECTA, like the Cambridge Curriculum. Why do you think they have done that?
    - What do you feel about this development?
    - Is there something the government can do to prevent it?

- What is most important for the teacher when planning a class: the syllabus, the textbook or the national exam?
    - Is this how it should be?

Appendix 7: Observational notes

Grade:

Topic:

Place in syllabus:

Teacher:

Learning materials:

Taxonomy:

Learning strategies:

Events:

Notes:

Appendix 8: Learning materials in the syllabus,

Form I:

Maps	Text	Photographs	Diagrams/tables/ Charts	Other
Globe	Texts on earth rotation	Photographs of earth and planets.	Diagrams showing different uses of solar energy	Videos cassettes and CDs.
Physical map				**Actual solar energy equipment**
Atlas maps	Texts on latitude and longitudes	Photographs showing comets, asteroids and meteors.	Chart or model shoring relative position of each planet.	Technological devices i.e. watch, cooker and calculator
Maps of the world with parallels and meridians	Texts on time and time zones.		Diagrams of Eclipses and seasons.	Weather station and its components
World map for time zones.	Texts on International Date line	The globe picture of solar system	Diagram showing ocean floor	**The Stevenson screen and its contents**
World map	Texts on oceans			**Weather instruments**
Relief map of the world	Texts on weather		Table of relative shapes and distances of space bodies.	Varied natural phenomena in the environment
Physical map of the world			Chart of the solar system	Human activities
Climatic map				Torch
Weather map			Charts depicting various devices for tapping solar energy	Lamps
Economic map			Weather charts	Any source of light
Map			Climatic charts	Clay soil
Simple topographical maps			Chart on magnetic compass	Water
Topographical maps				Color
Maps on different purposes				Environment
				Materials for recording weather statistics.
				Thread/ tape measures
				Drawing of irregular figures
				Mathematical set

				Magnetic compass

Form II

Maps	Texts	Photographs	Diagrams/tables/ Charts	Other
Statistical maps	Literature on large scale agriculture	Photographs of various human activities	Charts and pictures on the uses o waters	Audio visual facilities
Agricultural map of Tanzania		Photographs on small scale agriculture	Texts on land reclamation	Project site
Maps of Australia and Tanzania on livestock	Texts on livestock keeping	Photographs on livestock keeping.	Charts and pictures depicting environmental degradation caused by mining	Film on conservation of water
Maps of the location of the Rufijii River Basin Project and the Tennessee Valley Authority	Texts on underground water	Photographs of reclaimed areas		Actual site of water conversation project
	Texts on forests			Forest reserve
	Texts on minerals	Photographs on land reclamation in Tanzania, USA and the Netherlands		Video show
Map of Tanzania Drainage	Written documents			Sample of minerals
	Written texts on tourism	Photographs on extraction of water resources		**An actual mining area**
Vegetation map of the world				Videos on mining
Vegetation map of Tanzania	Texts on manufacturing industries	Photographs on water pollution		**Real jewels**
				Real power sources like firewood, charcoal, gas
Wall map and Atlas maps showing forest resources and timber processing	Texts on industrial activities	Picture depicting different types of forests.		Actual sample of cookers, calculators
		Photographs of forests		Real environment
	Texts on Energy and power sources	Photographs showing transportation of logs		Different sites on water use
Maps of the world minerals		Photographs showing different mining centers		
World map on mineral distribution	Texts on power and energy			List of problems facing forests in the world
	Text on power and energy sources harnessing	Picture of Mining centre		Tourist site
Map of economic activities		Picture showing the processing of minerals		Promotional materials and information from the Tanzania Tourist Board and other sources
Map of Tanzania showing Natural				

Gas Production Map of middle East showing oil production Maps of Namibia, Switzerland and Tanzania on tourism Map of the world showing areas where energy and power are produced Maps showing different power or energy centres Maps showing transport system in East Africa and in the World.		Picture showing jewels and gem. Pictures showing tourist sites Photographs depicting tourist activities Photographs of industrial products Photographs if manufacturing industries Photographs on production of cars in Japan, electronic equipment in South Korea and textile in Tanzania. Photographs showing different types of power and energy Pictures showing various methods/equipment for acquiring/extracting the resources Pictures of energy/power production centres Photographs n wing and solar power harnessing in USA and Biogas in Tanzania.		Actual industrial products.

Form III:

Maps	Texts	Photographs	Diagrams/tables/ Charts	Other
Wall maps World maps Topographical maps	Written materials on structure of the earth Written documents Written texts on lateral/horizontal movements Written documents on volcanism Text on earthquakes Text on mass wasting Texts on weathering Texts on erosion and deposition Literature on artificial forces Texts on soil Different Texts on soil erosion Texts on photographs Texts on statistics	Picture of seismograph **Picture showing Earthquakes** Picture showing effects of mass wasting Photographs of artificial forces Photographs showing soil profile Photographs and posters showing eroded areas. Pictures on various methods of soil conservation	Diagrams Showing concentric zones of the earth Diagrams showing movement of the earth Diagrams showing types of weathering Diagrams showing soil profile Ground, vertical and oblique photographs Photographs showing variety of features Different types of phtotgraphs Different statistical data Tables showing different statistics Tables and data for calculation Tables for data interpretation. Chart of simple geological Time Scale	Models of inner structure of the earth **Seismograph** Video Sample of rocks Soil Samples Field sites Tape measure Chain Arrows Ranging poles Pegs Compass

Form IV

Maps	Texts	Photographs	Diagrams/tables/ Charts	Other
World Climatic Maps Globe Worlds maps Maps showing settlement patterns Maps showing functions of settlement Maps showing different towns	Texts on research Research reports Written documents on population Written text on family planning Written documents on settlements List of urban problems Texts on environment	Pictures and photographs showing different human activities Photographs of cleared areas Photographs showing reclaimed areas	Population charts and graphs Data/information on birth rate, death rate and migration Population data	Dumping site Video Prepared questions on a paper VIPP Cards with geographical factors VIPP cards Flip Charts Manila cards Marker pens Realia Actual environment Resource person Grasses Seedlings Dustbins Brooms