MARGINALIZATION AND EDUCATION:
INTERNATIONAL PRESENCE, PERFORMANCE, AND POLICY

By

Alisha M. B. Brown

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ABSTRACT

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This dissertation is a collection of three separate but interrelated essays exploring the overarching topic of marginalization and education internationally. Across the essays a combination of qualitative and quantitative techniques are used to analyze marginalization and education for different student populations in different international contexts. In terms of the different marginalized populations that are studied, the first and third essays focus on disability while the second essay examines gender, socioeconomic status, home language, and immigrant status. Geographically, the first essay has the broadest focus at the global level, while the second and third essays focus on select countries in sub-Saharan Africa.

The first essay analyzes the presence and representation of disability in mainstream international education development discourse. Discourse analysis is used to systematically examine the attention that is paid to disability as a form of marginalization and the way disability is linguistically situated in recent international development strategy documents. Three documents produced by agencies that play a major role in international education development were purposefully sampled and analyzed, namely the World Bank, the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Children's Fund (UNICEF), and the Brookings Institute.

The second essay analyzes the relationships between multiple categories of marginalization, feelings of belongingness, and academic achievement across three sub-Saharan African countries using 8th-grade data from the Trends in International Mathematics and

Science, 2011 (TIMSS, 2011). Specifically, marginalization on the basis of one's gender, socioeconomic status, home language, and immigrant status is examined in Botswana, Ghana, and South Africa. A central component of the analysis involves investigating whether feelings of belongingness buffer the negative impact that marginalization can have on academic achievement in mathematics and science.

The third essay explores how the national inclusive education policy reform process for students with disabilities has been shaped by global and local forces in Tanzania. I investigate the perspectives and experiences of national policy actors working in the government, non-governmental organizations and universities by conducting semi-structured interviews in Dar es Salaam. My analysis focuses on understanding the appropriation of inclusive education policy in an effort to demystify the policy process and emphasize the agency of global and local actors.

Together, these three essays contribute to literature on marginalization in education at global and local levels. Individually, each essay offers a unique contribution by having different foci within the larger topic of marginalization and education internationally. While the first essay focuses on the presence and representation of a marginalized group within international education discourse, the second focuses on the academic performance of marginalized groups, and the third on educational policy for a marginalized group. In addition, the individual contribution of each essay is further enhanced by the diversity of research approaches that are used across the essays, including document analysis, quantitative secondary data analysis and qualitative research methods. The diversity of research approaches and range of subtopics explored within this dissertation enables each essay to provide a unique perspective on the presence, performance, and policy of particular marginalized student groups, while at the same time speaking to the larger issue of marginalization in education internationally.

ACKNOWLEDGEMENTS

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KEY TO ABBREVIATIONS

ADHD – Attention Deficit Hyperactivity Disorder

ASD – Autism Spectrum Disorder

BEST – Basic Education Statistics Tanzania

CIA – Central Intelligence Agency

COSTECH – Tanzania Commission for Science and Technology

CRPD – Convention on the Rights of Persons with Disabilities

CSO – civil society organization

DA – discourse analysis

DPO – disabled people's organization

EFA – Education for All

EMDE – emerging market and developing economy

ESR – Education for Self-Reliance

GDP – gross domestic product

GNI – gross national income

GPI – gender parity index

HER – home educational resources

ICF – International Classification of Functioning, Disability and Health

IDB – International Database

IEA – International Association for the Evaluation of Educational Achievement

IMF – International Monetary Fund

INGO – international non-governmental organization

IRB – Institutional Review Board

IRT – Item Response Theory

LMTF – Learning Metrics Task Force

MDG – Millennium Development Goal

MoEVT – Ministry of Education and Vocational Training

MoLYDS – Ministry of Labour, Youth Development and Sports

NGO – non-governmental organization

NPD – National Policy on Disability

OLS – ordinary least squares

PIRLS – Progress in International Reading Literacy Scale

SACMAQ – Southern and Eastern Africa Consortium for Monitoring Educational Quality

SES – socioeconomic status

SHIVYAWATA – Shirikisho la Vyama Vya Watu Wenye Ulemavu (Tanzania Federation of

Disabled People's Organizations)

TIE – Tanzania Institute of Education

TIMSS – Trends in International Mathematics and Science

UN – United Nations

UNESCO – United Nations Educational, Scientific and Cultural Organization

UNICEF – United Nations International Children's Emergency Fund

USAID – United States Agency for International Development

WHO – World Health Organization

CHAPTER 1. THE PRESENCE AND REPRESENTATION OF DISABILITY IN SHIFTING

GLOBAL EDUCATION DEVELOPMENT DISCOURSE: A DOCUMENT ANALYSIS

Introduction

There is an emerging understanding in global education dialogues that the focus on

access to education is being replaced with a focus on quality of education systems. Worldwide,

children are increasingly enrolling in school, so now there is a growing interest in understanding

what are they learning in school. This focus on excellence may generate new concerns about

equity because marginalized children are likely to be left behind in a system driven solely by

learning outcomes. Children with disabilities have a heightened risk of educational

marginalization and as a result are especially likely to be left behind. The United Nations

Educational, Scientific and Cultural Organization (UNESCO, 2010) considers disability to be

"one of the least visible but most potent factors in educational marginalization" (p. 181). In light

of this, I will explore the presence and representation of disability in these changing international

education development discussions. Specifically, I pose two research questions. First, to what

extent is disability present in international development education strategy discourse? And

second, to what extent is disability linguistically situated in international development education

strategy discourse?

This essay begins by setting the current international development education strategy

context and explaining the consequences of the shifting global education agenda for development

in general and for disability specifically. A close inspection of the presence and representation

of disability in a selection of global education development discourse follows. Next, details on

the sample of international education development documents that are analyzed, the discourse

analysis approach that is used, findings and implications are presented. In closing, limitations, future directions, implications, and recommendations are discussed.

Entering a New Era: International Development Education Strategy Context

We are in the midst of a historical transition as the focus of international development in education shifts from access to quality. This global shift is reflected in key international education development events which will be highlighted. After a series of global agenda setting meetings in the 1990s, at the Millennium Summit in September 2000, 189 members of the United Nations (UN) adopted a Millennium Declaration, from which eight Millennium Development Goals (MDGs) were formed to be reached in 15 years by 2015. Two of the eight goals focused on education: MDG2 achieve universal primary education and MDG3 promote gender equality and empower women (UN Millennium Project, 2005). A complimentary education development event occurred in Dakar in March 2000 when the Education for All (EFA) framework was adopted after reviewing progress of EFA goals set in 1990 by the international community. The EFA framework articulated six education goals which, like the MDGs, had a 2015 target date (see Table 1.1 for a complete list of the EFA and MDG education goals). If we view the international education development arena as a canvas, for the past two decades the MDGs and EFA goals have narrowed the educational canvas by focusing on universal primary education and gender parity indicators and targets (Ahmed, 2014).

Table 1.1
The Education MDGs and EFA Goals

Goal #	Education target
MDG2	Achieve universal primary education
	Target 2A: By 2015, all children, girls and boys, complete a full course of primary schooling.
MDG3	Promote gender equality and empower women
	Target 3A: Eliminate gender disparity in primary and secondary education preferably by 2005, and at all levels by 2015.
EFA Goal 1	Expanding and improving comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children.
EFA Goal 2	Ensuring that by 2015 all children, particularly girls, children in difficult circumstances and those belonging to ethnic minorities, have access to, and complete, free and compulsory primary education of good quality.
EFA Goal 3	Ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life-skills programs.
EFA Goal 4	Achieving a 50% improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults.
EFA Goal 5	Eliminating gender disparities in primary and secondary education by 2005, and achieving gender equality in education by 2015, with a focus on ensuring girls' full and equal access to and achievement in basic education of good quality.
EFA Goal 6	Improving all aspects of the quality of education and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills.

Source. MDGs retrieved from http://www.un.org/millenniumgoals/. EFA goals retrieved from http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-all/efa-goals/

As we leave the MDG-EFA era, the international emphasis on access to education is being replaced by an emphasis on quality education. Beginning in 1990, and accelerating to the 2015 deadline, critique and attention has turned to learning quality (McGrath, 2014b). A major criticism of the MDG-EFA framework is its failure to sufficiently address learning, which is at the core of the educational experience (Adams, 2012). While efforts have been focused on

getting children into school, less attention has been paid to learning in school, or the acquisition of knowledge and skills that enable children to live productive, healthy, safe lives. For example, data from the Brookings African Learning Barometer project shows that at the end of 4-5 years in primary school in 26 African countries, 45% of children fail to meet basic learning outcomes (Van Fleet, Watkins, & Greubel, 2012). Quality education is a dominant cross-cutting theme in global discourse concerning the post-2015 development agenda.

Consequences of the Shifting International Education Agenda on Development

The post-2015 global agenda has the potential to bring about a radical change in research and development funding priorities (McGrath, 2014a). Global discourse, including the documents that are analyzed in this essay, plays a fundamental role in shaping what this change will look like. International education development strategy documents are extremely influential because they reach a global audience of policy and decision makers, educational practitioners, and international funding institutions. Education sector policy documents produced by multinational agencies like the World Bank and the UN are unquestionably used as a key referent in decisions and negotiations by developing countries that rely on foreign aid (Klees, Samoff, & Stromquist, 2012). The power that these sorts of agencies and the education strategy documents that they produce have over international education development projects cannot be understated. To illustrate the breadth of this power, Klees et al. (2012) argue that over the past three decades the World Bank has situated "itself as the architect, implementer, and enforcer of global education policy" (p. xv).

Not surprisingly, the money that is tied to fulfilling the goals outlined in international education strategy documents has a great influence on the types of educational reforms and projects that are adopted around the world. An important concept to consider with regards to the

influence of international aid is 'donor logic' or what Steiner-Khamsi (2012) defines as understanding the nuances behind why and how aid is given to whom. Multinational agencies like the World Bank and the UN have assumed global leadership on matters of aid and international development due to their vast monetary and human resources have been increasingly serving as global policy advisors to national governments (Steiner-Khamsi, 2012). To receive a grant or loan, recipient governments have to subscribe to the priorities of the aid strategy of the donor.

Consequences for disability. The shift in international research and funding priorities from educational access to quality has important implications for children with disabilities globally. Children with disabilities are among the most marginalized in the world. In many countries children with disabilities are largely limited to neglect, abandonment, or institutionalization (UNICEF, 2013). One of the main obstacles facing children with disabilities is that they are often 'invisible' because the number of children living with disabilities globally is unknown. The most widely used global estimate of childhood disability prevalence is 93 million children, or 1 in 20 of those aged 14 years or younger (WHO, 2011). However, this global estimate is essentially speculative. Children with disabilities often do not get registered at birth and few countries have reliable data on disability prevalence rates (UNICEF, 2013). Since the shifting international education development strategy focus is on visible children who are already in school, the invisible children (i.e., children with disabilities) are at risk of being overlooked in efforts to improve learning outcomes.

In many countries of the world children with disabilities are disproportionately denied the right to an education. Disability restricts children's educational opportunity and has been found to be related to low enrollment, low attendance, and high dropout rates (UNESCO, 2010;

USAID, 2011). For example, a WHO (2011) survey in 51 countries found that 51% of boys with

disabilities complete primary school compared to 61% of boys without a disability. In contrast,

the same survey found that 42% of girls with a disability complete primary school compared to

53% of girls without a disability. Disability presents many barriers to educational access such as

insufficient physical access to schools, lack of accessible learning resources and assistive

technology, attitudinal barriers, and limited teacher capacity. To illustrate the severity of the

restricted educational opportunities for children with disabilities, a recent monitoring report of

the Convention on the Rights of the Child acknowledges that "the challenges faced by children

with disabilities in realizing their right to education remain profound" and goes on to recognize

"children with disabilities as one of the most marginalized and excluded groups in respect of

education" (UN, 2011, p. 8).

Global efforts need to continue to overcome such challenges to improve the disparate

access that children with disabilities have to education. Building upon Adams' (2012)

recognition of the MDGs and EFA goals as important 'building blocks' for the betterment of

education globally, it is important not to prematurely abandon efforts focused on educational

access for children with disabilities specifically. As the statistics presented in the previous

paragraph illustrate, the foundational step or building block of getting children with disabilities

into their community's schools has yet to be realized. As a result, the shifting global agenda

focusing on quality over access is concerning for children with disabilities because domestic

policies and projects in developing countries, and development and financing policies in donor

countries are emphasizing educational quality. Yet, most development initiatives for children

with disabilities target educational access, so as the broader international development focus

moves beyond access to quality the priority of educational access for children with disabilities

may receive less global attention and resources. In light of the concerns for children with disabilities caused by the shifting international education development agenda, select education strategy documents are carefully analyzed to see if and how disability is represented.

Method

A systematic document analysis of three international development education strategy documents was conducted. The research questions, sample of international education development documents, and analytical approach are explained below.

Research Questions

To examine the presence and representation of disability in the mainstream international education development discourse, my analysis of international education development documents was guided by the following research questions:

> RQ1. *To what extent is disability present in international development education strategy discourse?*

> RQ2. *How is disability linguistically situated in international development education strategy discourse?*

Sample

Table 1.2 lists the three international education development documents that are analyzed. The title, date, objective, and main agency(ies) involved for each report are specified in the table. These select documents are limited to recent World Bank, UNESCO, and UNICEF reports in an effort to capture the dominant discourse on global education development within the current zeitgeist. Additionally, a recent report from an influential international non-governmental organization (INGO) is also included in the sample, namely The Brookings Institute. The Brookings Institute was selected as an influential INGO in international education

development due to its joint effort with the UNESCO Institute for Statistics to convene the

Learning Metrics Task Force (LMTF), which will be explained below. Together, all of these

agencies play a major role in education development internationally, so recent key documents

produced by these agencies were purposefully sampled. A more detailed description of each of

the documents that comprise the sample follows.

Table 1.2

Sample

Report Title	Report Date	Report Objective	Main Agency(ies) Involved
Learning for all: Investing in people's knowledge and skills to promote development: World Bank Group education strategy 2020	April 2011	Present the Bank's new 10-year strategy to achieve their learning for all objective	The World Bank
Making education a priority in the post-2015 development agenda: Report of the thematic consultation on education in the post-2015 development agenda	September 2013	Summarize main themes and messages that emerged from global consultations on education to inform the post-2015 education agenda	UNESCO; UNICEF
Toward universal learning: Recommendations from the Learning Metrics Task Force	September 2013	Make recommendations for the global measurement of learning outcomes to help ensure quality education for all	LMTF from the Brookings Institution; UNESCO Institute for Statistics

The earliest published document included in the sample is the World Bank's new

Education Strategy 2020 entitled *Learning for All: Investing in People's Knowledge and Skills to*

Promote Development (World Bank, 2011). This document presents the World Bank's 10-year

strategy to achieve their learning for all objective through two strategic goals: reforming

educational systems beyond inputs and building the knowledge base for educational reform. The

World Bank education strategy is a highly influential document in the international development arena that has been widely disseminated to people all over the world working in the field of education and development (Pitman et al., 2012). The remainder of the documents were selected to reflect recent discussions on the post-2015 global discourse.

As the deadline to achieve the MDGs and EFA goals is fast approaching at the end of 2015, UN stakeholders are engaged in discussions and consultations for a post-2015 development agenda. Numerous documents have been released on the discussions related to the post-2015 development agenda, and two such documents are analyzed here that were published during the time that this study was carried out. In September 2013 a report was released by the Global Thematic Consultation on Education in the Post-2015 Development Agenda, which was co-led by UNESCO and UNICEF. The title of the report is *Making Education a Priority in the Post-2015 Development Agenda* (UNESCO & UNICEF, 2013). As part of its post-2015 development discussions, the UN is conducting global thematic consultations with academics, the media, the private sector, employers, civil society, and other stakeholders covering eleven areas, which include education, health, water, environmental sustainability, energy, inequalities, governance, growth and employment, population dynamics, food security and nutrition, and conflict, violence and disaster. The report that is analyzed came out of the education global thematic consultation held September 2012 to March 2013.

The Brookings Institution is also playing an active role in post-2015 development discussions. The most recent report launched in September 2013 by the Learning Metrics Task Force (LMTF) is also analyzed. The LMTF, convened by the UNESCO Institute for Statistics and the Center for Universal Education at the Brookings Institution, is working to ensure that learning is a central component of the post-2015 development agenda and makes

recommendations for goals to improve learning opportunities and outcomes worldwide (LMTF, 2013). The summary report is tilted *Toward Universal Learning: Recommendations from the Learning Metrics Task Force* (LMTF, 2013).

Analytical Approach

Discourse analysis (DA) is used to examine the attention that is paid to disability as a form of marginalization and the way in which disability is linguistically situated in the sampled international development education strategy documents. There is no unitary or standardized analytical approach for DA. Instead, DA is best viewed as a shared perspective that encompasses a variety of theoretical and methodological approaches (Phillips & Hardy, 2002; Schiffrin, Tannen & Hamilton, 2001). For my analysis, I draw largely upon the analytical approach and tools shared by Huckin (1997). Following Huckin's recommendation, I approached the text in two stages. First, I read the documents in an uncritical manner. The goal here was to approach the text as a typical reader who is reading for comprehension. Second, I then revisit the text in more of a critical and meticulous manner. At the second stage I approached the text at three different levels, moving from the text as a whole, down to sentences, and finally down to words.

While focusing on the text as a whole, Huckin (1997) recommends analyzing how the content of the text is presented and structured, or how the text is framed. Helpful devises to pay attention to that signify framing include photographs, diagrams, tables, and headings. As part of my analysis I focused on identifying how disability was framed within the international education strategy documents. Other elements to consider when analyzing the text as a whole include foregrounding/backgrounding. These concepts refer to the author's emphasis or

diminishing of certain factors. As part of my analysis I will attempted to see whether disability

was emphasized or deemphasized in the text.

Moving to more minute levels of analysis, I used additional tools recommended by

Huckin (1997) when analyzing text at the sentence and word levels. One such tool is

topicalization. Writers influence readers' perceptions of importance with their decision of where

to grammatically place the topic of a sentence. As part of my analysis, I made note of where the

topic of disability falls within sentences. Additionally, sentences convey information about

power relations. In sentences that mention disability, I paid attention to who is depicted in power

over whom, which is referred to as agency. Finally, individual words carry with them certain

connotations. When analyzing the word 'disability' in the documents I aimed to decipher which

connotations that specific word carries in the text. Together, applying these analytical tools to

my discourse analysis of select international education strategy documents helped me closely

examine the presence and representation of disability to understand the ideological meanings

behind the text.

Results

Discourse analysis results are presented below for each research question. Throughout

the results comparisons are made between the three international education development strategy

documents concerning the presence of disability and the ways in which disability is linguistically

situated.

RQ1: Presence of Disability in International Development Education Strategy Discourse

Disability is explicitly mentioned in all three of the international development education

strategy documents. Figure 1.1 illustrates that the UNESCO and UNICEF document mentions

disability the most (disability word count = 15), followed by the Word Bank document

(disability word count = 6), and the LMTF document mentions disability the least (disability word count = 2). Note that in order to capture all possible stems of the word disability, these frequency counts include the number of times that the words disability, disabilities, or disabled are mentioned.
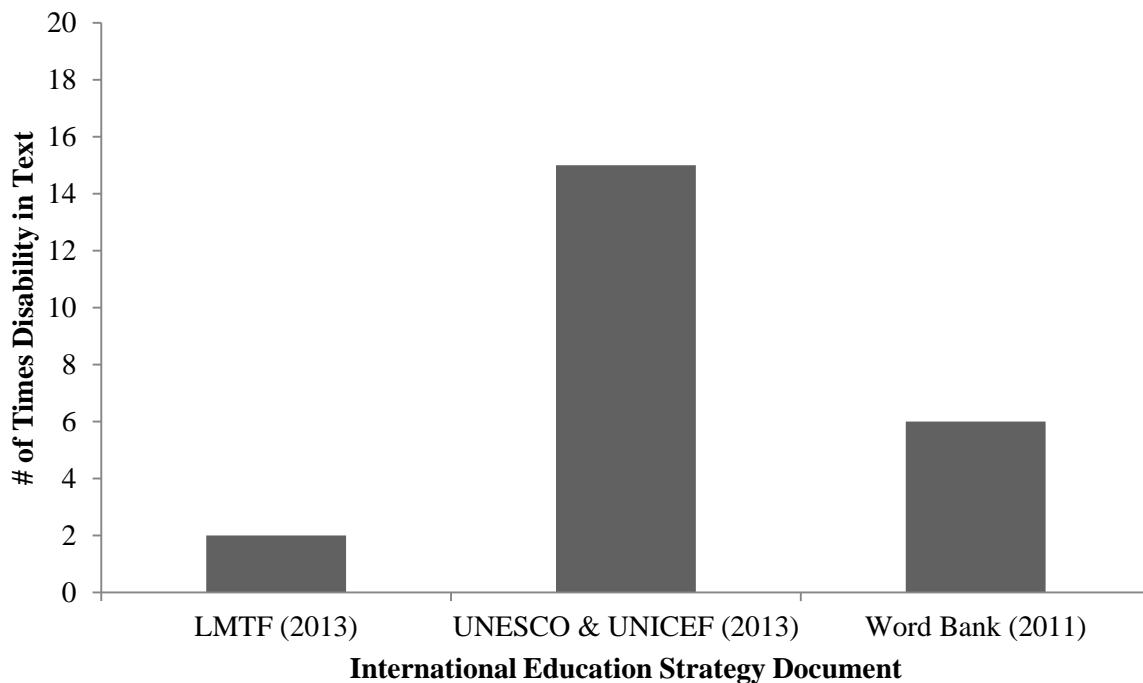
Figure 1.1. Number of times disability is explicitly mentioned in the main text of each document.

Given that the documents differed in length, in addition to examining the raw word count, it is also important to examine the relative presence of disability within the text as a whole. Table 1.3 reports the ratio of the number of times that disability is mentioned relative to the total number of words in each document. When document length is taken into account, the presence of disability is comparable between the LMTF and World Bank documents with their respective disability to total words ratios of 0.00018 and 0.00021. The presence of disability is slightly higher in the UNESCO and UNICEF document, with a ratio of 0.00086.

Table 1.3

Presence of the Word Disability Relative to Total Words in Each Document

Report	Disability Word Count	Total Words	Ratio of Disability to Total Words
LMTF (2013)	2	10,988	0.00018
UNESCO & UNICEF (2013)	15	17,382	0.00086
Word Bank (2011)	6	28,596	0.00021

Note. Disability word count includes all possible stems of the word disability, notably disability, disabilities, and disabled. Total word count includes all words in the main body of the text. Words on the title page, table of contents, abbreviations page, references, and appendices were not included in the total word count.

Overall, although disability is explicitly mentioned in all of the international education development strategy documents that were analyzed, its presence is quite limited. This limited presence is reflected in the small number of times that disability is mentioned in each document overall and in relation to the total word count. Moving to the next stage of analysis, the ways in which disability is linguistically situated in the documents when it is present are explained below.

RQ2: How Disability is Linguistically Situated in International Development Education Strategy Discourse

Results concerning how disability is linguistically situated in the international education development strategy documents are divided by the textual level of analysis to illustrate the nuanced insights that were found at each layer of analysis. First, findings at the macro level are presented when the three texts were analyzed as a whole. Second, findings at the more minute levels of analysis (i.e., at sentence and word levels) are presented.

Representation of disability in the text as a whole. When approaching the text as a whole, I analyzed how disability is framed within the documents and whether disability is

emphasized or deemphasized in the text given its textual prominence. I found that disability is primarily linguistically situated in the background of the text as a whole. This was particularly true in two of the three documents (those by the LMTF and the World Bank).

    Disability in the background. The overarching frame of the LMTF and World Bank documents was educational quality for all children. Although disability was briefly acknowledged in both documents as falling under the *all* umbrella, it was not emphasized. To explain, the structure of the LMTF document begins by calling attention to the global learning crisis, then presents seven recommendations to improve the quality of education for children worldwide, and closes with a call to action. Disability is mentioned in the section that discusses Recommendation 5: Equity, more fully stated as, "Measurement of learning must include a focus on equity" (p. 31). Within this section disability is framed as a marginalized group, as a "sociodemographic" (p. 32) source of educational "disparities within countries" (p. 31) that should be measured and whose "differences in learning opportunities" (p. 31) should be addressed. Disability is represented as one sociodemographic dimension among many others including sex, age, race, urban or rural residence, socioeconomic status, mother tongue, ethnicity, citizenship, and emergency situations – all of which characterize the "*most* [emphasis added] marginalized children and youth" (p. 32). Besides being included in the equity section of the document, disability does not surface in any of the other six recommendations, any tables or figures, or any headings or subheadings. The main message of the document is to highlight the need for improving the learning of children and youth around the world and that global measurement is an important mechanism to meet this cause. Disability is in the background under the banner of equity along with numerous other marginalized groups.

The structure of the World Bank document follows a similar pattern by first identifying the importance of improved education for development, and then proceeds to map out their new education development strategy to improve the learning outcomes of all children. An additional section is devoted to reviewing lessons learned from past World Bank Group development work in education, and then the document closes by specifying what they term "implementation levers" for the new strategy. In contrast to the LMTF document, in the World Bank document disability appears in more than one section. However, like in the LMTF document, disability is framed as one of many marginalized "disadvantaged populations" (pp. 10, 78) whose educational progress is lagging. Disability is most often presented in a long list of other marginalized, disadvantaged population groups. More specifically, disability is listed as a population group that faces "barriers" (p. 5) to educational attainment and is listed as a reason for why youth "drop out of school early" (p. 26) in the body of the text. Structurally, not unlike the LMTF document, disability is not in any figures, headings or subheadings in the World Bank document. However, disability is in a table that is included twice in the document (once in the Executive Summary on page 10 and again in the final section of the document on page 78). The table is titled Performance, Outcome, and Impact Indicators for the 2020 Education Strategy and disability occurs once in brackets as an example of a disadvantaged population alongside income groups, gender, and ethnolinguistic groups in the Impact Indicators column.

On first glance it appears that disability has slightly more textual prominence in the World Bank document compared to the LMTF document because it is in a table. Huckin (1997) noted that visual aids such as tables point to framing and textual prominence when analyzing the text as a whole, so the inclusion of disability in a table in the World Bank document should theoretically signify its emphasis in the text. However, I argue that disability is still primarily in

the background due to its omission in the body of the text that corresponds to the portion of the table where it is listed. In the context of the table, disability is an example of a disadvantaged population group whose reduced schooling and learning gaps should be measured as an impact indicator. Yet, in the larger body of the text disability is entirely absent from all discussions around educational measurement for knowledge generation, which is a key priority of the Education Strategy (Priority 2: Building a High-Quality Knowledge Base to Underpin Education Reforms). For instance, considerable attention is paid to discussing the establishment and improvement of countries' education management and information systems (EMIS). Furthermore, the issue of educational measurement is relevant to the multiyear System Assessment and Benchmarking for Education Results (SABER) program that is promoted and is also central to all three knowledge implementation levers: (1) system assessment and benchmarking tools, (2) learning assessments, and (3) impact evaluations and analytical work. Thus, educational measurement is a recurring theme in the World Bank text as a whole, but disability is omitted from this larger dialogue. Huckin (1997) asserts that omission is the ultimate form of backgrounding, which is relevant to my analysis here because the omission of disability in the text discussing measurement in essence overshadows any textual prominence that is afforded by its presence in the table.

On the whole, in both the LMTF and World Bank documents, disability is never discussed in detail. Instead, it is briefly mentioned as an educationally disadvantaged sociodemographic category along with other marginalized population groups such as low-income children, ethnolinguistic minorities, girls, children displaced by conflict, and children living in rural areas. Because disability is never brought to the forefront within the larger structure and frame of these documents, it is deemphasized in the texts as a whole.

Disability emerging from the background. In contrast to the World Bank and LMTF

documents, disability has more textual prominence in the UNESCO and UNICEF document.

The reason for this notable difference is that inequality is a central theme in the UNESCO and

UNICEF document, as opposed to being on the periphery in the other documents. Disability has

more of a natural fit under this larger inequality frame focused on a human rights-based approach

to education, so it is not surprising that disability is featured more prominently throughout this

document. Disability is mentioned in nearly all sections of the document, and although disability

is not explicitly in any tables, figures, headings or subheadings, it is showcased throughout a

subsection titled Inclusion in Section 5.4 Cross-cutting issues. It is worth noting that the other

two subsections in Section 5.4 are Gender and Emergencies, so girls and children who are

displaced by conflict or natural disasters do get more attention structurally in the document than

children with disabilities. Also, children with disabilities share the Inclusion subsection with

numerous other marginalized and vulnerable groups (those living in remote and rural contexts,

ethnic groups, indigenous peoples, refugees, migrants, internally displaced people, children in

hazardous work or armed forces, those living with HIV, without parental care, and in

institutions).

Another structural detail that signifies more foregrounding of disability in this document

compared to the others is that disability is mentioned in a highlighted textbox in Section 5.3

Quality Education titled Frequently Mentioned Obstacles to Good-Quality Education under the

bullet labeled Inequity. Here, attention is called to "discrimination against marginalized and

socially excluded groups, and failure to include and respond to the needs of children and young

people with disabilities" (p. 23) as a barrier to quality education. Children living in rural areas

and areas of conflict, political instability, and disasters are also highlighted in this bullet point, but nonetheless disability is explicitly highlighted.

A final piece of evidence concerning the greater emphasis on disability in the UNESCO and UNICEF document is that when the challenge of inequality is introduced in Section 2.0 Progress and Gaps in Education, readers learn that special attention was paid to disability during the educational consultations for the post-2015 development agenda. This purposeful attention to disability is highlighted in its own paragraph at the end of the subsection:

In the educational consultations, particular attention was given to children and adults with disabilities, who have not been systematically included in development planning, policies or budgeting. Estimates suggest that 30 per cent of all primary age children who are out of school are children with disabilities. (p. 11)

While it is clear that disability has more textual prominence in the UNESCO and UNICEF document compared to the LMTF and World Bank documents, disability still remains somewhat in the background when compared to other disadvantaged groups and due to its omission in some areas of the body of the text. For example, in a small subsection Linking Education to Employment, disability is listed alongside other marginalized groups (gender, location, wealth, ethnicity, migrant status, sexual orientation, and age) as a marker of inequity that should be measured and disaggregated. However, disability is not included in other sections of the text that are focused on measurement like Section 4.3 Accountability, the Developing Education Targets and Indicators subsection, and the Global vs. National Outcome Measures subsection. Additionally, disability was omitted from the Learning Environment subsection. Gender, on the other hand, was included by mentioning the need for "separate toilets in sufficient

numbers for boys and girls" (p. 28). Disability is relevant to this discussion about toilet

accessibility and safety, but it is absent from the text.

Lastly, although disability is emphasized in the text as a whole more in the UNESCO and

UNICEF document compared to the other two, disability is framed the same way across all three

documents: as a marginalized group faced with educational inequalities. The language

contextualizing disability in the UNESCO and UNICEF document mirrors that of the LMTF and

World Bank documents by couching disability as one "marginalized and vulnerable group" (pp.

16, 30, 38) among many others. The UNESCO and UNICEF document does go one step further

than the others in its conceptualization of marginalization by referring a few times to the

historical and structural nature of inequalities that lead to the marginalization of particular groups

by referring to "exploitive economic/social relations and inequitable social structures" (p. 30)

and "discrimination" and social exclusion (p. 23). The UNESCO and UNICEF document also

provides slightly more detail about disability by mentioning the use of information and

communication technologies (ICT), "such as talking computers – to assist people with

disabilities" (p. 28), and alluding to diversity within disability as a group by specifying "learning

and physical disabilities" (p. 30). However, like in the LMTF and World Bank documents, the

majority of the time disability is mentioned in a very broad sense as an example of a

marginalized population group.

Representation of disability in sentences and words. Turning to the more minute

levels of the text, I analyzed where disability falls within sentences, the agency of people with

disabilities within sentences, and the connotation of the word disability. Figure 1.2 shows that

the word disability most commonly falls in the middle of a sentence listing marginalized categories.[1]
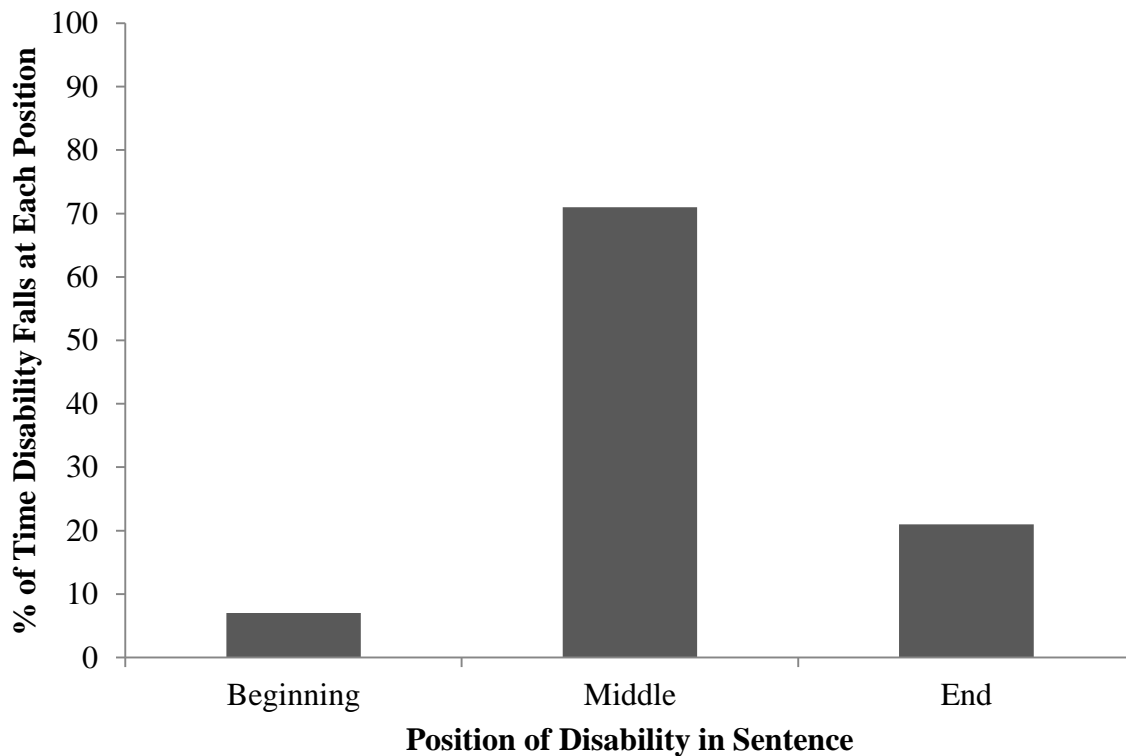
Figure 1.2. Percentage of time the word disability falls at the beginning, middle and end of a list of marginalized categories within a sentence.

Only once was disability listed as the first marginalized category within a sentence, which occurred in the UNESCO and UNICEF document. Twice disability fell at the end of a list of marginalized categories within a sentence: once in the UNESCO and UNICEF document and once in the World Bank document. All other times disability fell in the middle of a list of marginalized categories within a sentence, which amounted to 71.43% of the time. Thus, across the documents the topic of disability was rarely emphasized in a list of marginalized categories within a sentence by being placed at either the beginning or the end of the list to draw readers'

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[1] Note that the ordering of marginalization categories was checked to confirm that the placement of disability did not appear to be due to alphabetization.

attention to it. Instead, it appeared as if the topic of disability was hidden among other

marginalized categories.

Turing to agency, people with disabilities were presented as passive recipients of aid in

the context of the sentences where disability was mentioned in the documents. In other words,

people with disabilities were not represented in the text as active agents. This finding is drawn

from the way that disability was commonly framed as a marginalized, disadvantaged group

across the international education development strategy documents. In this regard, people with

disabilities are represented as victims of educational inequality, implying a sense of vulnerability

and powerlessness. In fact, the word "vulnerable" was repeatedly used when framing disability

as a marginalized group in the UNESCO and UNICEF document (pp. 11, 16, 28, 30, 39). An

additional element to consider regarding sentence-level power relations is what Huckin (1997)

refers to as "the agent-patient relationship" in the case of these documents. I argue that disability

is the patient and international development agencies are the agents because international

development agencies are represented as initiating actions (and thus exerting power) over the

disabled population in the documents. For example, let us consider the following sentence from

the World Bank document: "This goal will require lowering the barriers that keep girls, people

with disabilities, and ethnolinguistic minorities from attaining as much education as other

population groups" (p. 5). Although the agent who will lower barriers for people with

disabilities and other marginalized groups is not explicitly mentioned in this sentence, because

the text is talking about the World Bank's 2020 Education Strategy goals, we can infer that the

World Bank and its international development partners serve as the active agents here.

At the word level, disability carried a negative connotation. The words that were

commonly used to frame disability across the documents including "marginalized," "vulnerable,"

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and "disadvantaged" are all negative words themselves, and this negative connotation carries over to the word disability. Throughout the international education development strategy documents, disability was never presented in a positive light. Instead, the word disability served as a sociodemographic marker of disadvantage and inequality.

Discussion

Implications and Recommendations

The results of this document analysis have numerous implications for the post-2015 education development agenda. First and foremost, the limited presence of disability across the documents, the fact that disability largely remains in the background of the text as a whole, and the way in which disability is hidden among other categories of marginalization within sentences calls to attention the lack of emphasis that international education development agencies are placing on disability in their post-2015 vision of education development work. This has clear implications for children with disabilities, as so much development work and research is based upon the goals and objectives that are communicated in these types of documents. While it is encouraging that disability has more textual prominence in the UNESCO and UNICEF document compared to the LMTF and World Bank documents, this document analysis does by no means demonstrate that disability is at the absolute forefront of the discourse.

While the UNESCO and UNICEF document brings disability out of the background slightly more than the other documents, there is still room for improvement. In all documents, details about the intricate meaning of disability and about the unique learning needs of students with disability are largely absent. Instead, disability is oversimplified as a sociodemographic marker of marginalization. The documents begin to scrape the surface by including disability in varying degrees, with UNESCO and UNICEF doing a better job than the LMTF and the World

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Bank in terms of the emphasis placed on disability as a marginalized population group. However, a deeper discussion of what disability means and how disability is difficult to measure is missing from all of the documents. Although in reality space is limited in these documents to add details such as this, I feel that some additional explanation is warranted due to the unique complexity of disability. To explain, the other population groups that disability is commonly grouped together with are in many ways easier to understand and measure. For example, a child's gender is essentially a biological trait and their income level is computed using parental salary amounts. While I acknowledge that these constructs can be nuanced to some degree as well, such as challenges classifying the gender of transgender children and difficulties obtaining accurate parental salary data in developing economies, the construct of disability is arguably more complex to define and measure and these nuances will be elaborated upon below.

There are multiple reasons that it is difficult to define and measure disability in general and cross-nationally. First, disability is not monolithic – it is a heterogeneous construct with multiple forms or categories existing under the general category of disability. In a given education system a child is rarely designated as disabled or not. Instead, he or she is labeled with a certain type of disability such as Autism Spectrum Disorder (ASD), Attention Deficit Hyperactivity Disorder (ADHD), Learning Disability, Visual Impairment, Hearing Impairment, or Intellectual Disability. The representation of disability as a uniform construct in the documents analyzed here is an oversimplification of a highly complex category of marginalization.

An added layer of complexity for international educational development is the challenge of working across multiple contexts and cultures. Different national educational systems each have their own policies and procedures for disability identification and classification. What

officially "counts" as a disability is different in different countries. To illustrate how such differences might play out with an example, a child in the U.S. who acts out behaviorally in class may be classified as Emotionally Disturbed, but in another context that same child may be given a different disability classification or may not be classified as having a disability at all. Thus, there are cross-cultural differences in disability classification that are not reflected in the international education strategy documents. An acknowledgment of these sorts of complexities is important to provide readers with a more accurate understanding of disability as a marginalized group.

Another aspect to consider is the increased recognition of the social element of disability. Since the 1990s there has been a theoretical shift away from the 'medical model' where disability was solely viewed as an abnormal ailment that exists within an individual towards the 'social model' where disability is viewed as being caused by discriminatory societal attitudes and environmental barriers (Lindsay, 2003; Oliver, 1996; Thomas, 1999). While there is no globally agreed upon definition or measurement of disability, the conceptual framework and classification system of the World Health Organization International Classification of Functioning, Disability and Health (ICF) (WHO, 2001) is becoming increasingly recognized as the gold standard. There is clear overlap between the social model of disability and the WHO ICF conceptualization of disability, as the WHO ICF recognizes disability as the interaction between a person with a health condition and environmental contextual factors. However, the applicability of this classification system to non-Western contexts is uncertain. For example, in her study on the conceptualization of disability in Ghana, Anthony (2011) asserts that neither the medical model nor the social model adequately explain the experience of disability in Ghanaian culture. The cultural relevance of Western ways of conceptualizing and measuring disability should be

critically examined when developing international education development strategies that encompass non-Western contexts.

Finally, given the larger context and purpose of these documents to inform the post-2015 education development agenda, it is not surprising that people with disabilities were presented in the text as passive recipients of aid or that the word disability carried with it a negative connotation. Nonetheless, if people with disabilities are not mentioned as a potential resource to strengthen the economy and communities, then this is akin to the classic search for pathology or deficit-driven thinking that traditionally characterizes the medical model of disability. The reductionist deficit-driven mentality of special education is classically defined and critiqued as spending a considerable amount of time and resources on seeking and remediating deficits (Poplin, 1984a, 1984b, 1988). Deficit-driven thinking runs counter to the social justice ideology of inclusion, which seeks profound social change where difference is actually celebrated (Barton, 1997, p. 234). It is problematic if organizations that are strong proponents of inclusion like UNICEF and UNESCO may actually perpetuate more deficit-driven perspectives of people with disabilities as opposed to more positive or empowering strength-based perspectives.

There were notable instances of lost opportunities to represent people with disabilities as having more agency and in a more positive light in the documents. For instance, all three documents included a discussion about shared responsibility through strategic partnerships between multiple stakeholders towards achieving quality education for all. To illustrate with an example, the UNESCO and UNICEF document argues that the involvement of "civil society organizations, including local NGOs…must be expanded to lobbying and influencing educational policy and improving inclusive, quality education" (p. 17). The involvement of disabled people's organizations (DPOs) could be added to this discussion to show that there is an

important role to be played by the people who are experiencing educational inequalities and marginalization themselves, as opposed to outside advocates only. DPOs are comprised of people with disabilities, and recommending their involvement in post-2015 education development initiatives is one way that people with disabilities could be portrayed more as active, positive agents. While DPOs technically falls under the NGO umbrella term, most readers would not make this connection, and specifically including DPOs in the text would bring attention to people with disabilities as active agents. Including people with disabilities as part of the strategic partnerships that the documents refer to is important to have a shared distribution of power and agency in the planning and development process.

Limitations and Future Directions

Looking forward, there are numerous extensions of this research that can address some limitations of this document analysis. The primary limitation of this research is the number of documents that were analyzed. The three documents analyzed here were selected as a sample that captures the perspectives of key international education development agencies. As a result, documents produced by international development agencies outside of the World Bank, LMTF, UNESCO, and UNICEF were not included. This study provides a valuable starting point and future work could expand the breadth of the current document analysis by analyzing additional documents published by other international development agencies.

A related limitation is the timely nature of the documents and wider discourse concerning the post-2015 development agenda. The engagement of multiple stakeholders in discussions and plans for their post-2015 development agenda is ongoing, and this document analysis is limited to the discourse as it stood when the documents were released (April, 2011 and September, 2013). International education development is a dynamic, evolving process. This document

analysis provides insight into the early stages of the post-2015 international education development process, with the hope that my findings might in some small way inform the process as it continues to advance. More recently published as well as future international education development strategy documents should be analyzed to continue to monitor and critique the presence and representation of disability.

Finally, the focus of this essay was limited to analyzing the presence and representation of disability in the documents. Disability is one of many marginalized groups in education, and future research should document the presence and representation of other marginalized groups in post-2015 international education development documents. For example, the rural poor, young girls from disadvantaged homes, slum dwellers, and pastoralists are identified as the most marginalized children in the learning crisis in Africa (Watkins, 2013). Similar analyses to the one done here but focusing on a different marginalized group would provide an interesting point of comparison. Moreover, it would be valuable to compare and contrast the presence and representation of multiple marginalized groups in such documents in a relative manner. For instance, future work should consider if disability is proportionately under or over attended to compared to other sociodemographic categories of marginalization such as ethnolinguistic minorities, girls, or children displaced by conflict. Additionally, an alternative way to extend this work is to analyze how disability (compared to other marginalized categories) is related to broader terms reflective of marginalization such as poverty, under-represented populations, disadvantaged learners, or at-risk learners.

Conclusion

Together, this document analysis provides insight into the presence and representation of disability in international education development discourse. The analysis shows that although

disability is explicitly mentioned in all three of the international development education strategy documents, disability is linguistically situated in the background and is underemphasized for the most part. Furthermore, the document analysis demonstrates that disability is conceptualized as a vulnerable marginalized population group in the text as a whole, disability is often hidden in the middle of a list of other marginalized groups in sentences, people with disabilities are not depicted as active agents, and the word disability holds a negative connotation. Until disability more fully moves into the spotlight in the international education development discourse, children with disabilities will continue to be marginalized in future documents and in turn in international education development efforts. Additionally, the implications and recommendations of this analysis suggest the value in recognizing the conceptual and measurement challenges associated with disability in light of inconsistencies in the definitions of disability within and across countries, as well as the heterogeneity of the socially and culturally bound concept of disability.

Overall, this essay highlights that it is not only important to carefully consider the emphasis that is placed on disability in international education development discourse, but also the ways in which disability is linguistically situated and represented. Representing disability in a more nuanced and even empowering way may help increase the likelihood that the unique needs of children with disabilities are adequately taken into account in future international education development conversations and initiatives.

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CHAPTER 2. ACADEMIC ACHIEVEMENT OF MARGINALIZED POPULATIONS IN SUB-

SAHARAN AFRICA: THE BUFFERING EFFECT OF BELONGINGNESS

Introduction

The attention paid to advancing the academic achievement of marginalized populations has been increasing globally. International campaigns such as the first Education for All (EFA) conference, held in Jomtien, Thailand in 1990 have played a large role in building this momentum. The United Nations Scientific and Cultural Organization (UNESCO) EFA goals call on all world nations to improve the quality of education so that measurable learning outcomes are achieved by all children. Furthermore, the EFA goals explicitly highlight the need to focus on what they refer to as "the most vulnerable and disadvantaged children," and identify girls and ethnic minorities as marginalized populations that deserve special attention (UNESCO, 1990).

Yet despite this increased attention to improving the academic achievement of marginalized student populations, limited progress has been made. The most recent EFA global monitoring report detailed how progress towards many of the goals has been slowing down and projected that most goals will remain unmet, particularly in sub-Saharan Africa (UNESCO, 2012). For significant progress to ever become possible in the advancement of the academic achievement of marginalized groups, it is essential that researchers identify and understand factors that can be modified or changed to break the cycle of marginalization and poor academic outcomes. Unfortunately, a child's membership to a particular marginalized group can often not be changed (e.g., being a girl). However, their feelings of belongingness can be changed. Feelings of belongingness in relation to marginalization and academic achievement constitute a

gap in existing research that has important implications for policy and practice, particularly in developing contexts where marginalization and poor academic performance is widespread.

This study addresses this gap by investigating the relationship between feelings of belongingness, multiple forms of marginalization, and student achievement across three sub-Saharan African countries using eighth grade data from the Trends in International Mathematics and Science, 2011 (TIMSS, 2011). Specifically, marginalization on the basis of a child's gender, socioeconomic status (SES), home language, and immigrant status is examined in Botswana, Ghana, and South Africa. Student achievement in both mathematics and science is explored because competence in mathematics and science is critical in today's competitive global innovation economy, particularly for developing economies. In addition to examining the direct effects of feelings of belongingness and marginalization on academic achievement, the central component of this analysis investigates whether feelings of belongingness buffers[2] the negative impact of marginalization on academic achievement in mathematics and science.

Literature Review

The following literature review is divided into three major sections. The first section reviews literature on the need to belong with a focus on the relationship between feelings of belongingness and academic achievement. The second section reviews literature on marginalization in education with a focus on the relationship between marginalization and academic achievement. Literature on the academic achievement of multiple marginalized student populations is summarized and is divided into specific subsections for marginalization on the basis of a child's gender, SES, home language, and immigrant status. Finally, the third

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[2] Buffering refers to a type of moderation where the effect of the primary independent variable on the dependent variable is weakened as the moderator increases (West & Aiken, 1991).

section reviews literature specific to the sub-Saharan African context which demonstrates why sub-Saharan Africa is a suitable context to study marginalization.

The Need to Belong

The need to belong has been established by empirical research in the field of psychology. In their review of empirical research on this topic, Baumeister and Leary (1995) tested what they referred to as the 'belongingness hypothesis,' which posits that the need to belong is a fundamental human motivation. After reviewing the literature, Baumesiter and Leary concluded that the need to belong is indeed central to human wellbeing. A large body of literature also exists on the negative consequences of having this core social need threatened in the form of social exclusion or ostracism (see reviews by Williams, 2007; Williams & Nida, 2011).

Feelings of belongingness and academic achievement. While the connection between feelings of belongingness to psychological wellbeing has been well established by research, less is known about the link between feelings of belongingness and academic achievement. Research suggests that it is important for schools to consider the effects of belongingness on academic achievement (Johnson, 2009). However, there are inconsistencies in the literature concerning the exact nature of the relationship between feelings of belongingness and academic achievement.

To explain, many correlation studies show that children who are preferred by their teachers and peers tend to be high achievers while those who are rejected tend to be low achievers (Green, Forehand, Beck, & Vosk, 1980; Katz, 2013; Ladd, 1990; Swift & Spivack, 1969; Taylor, 1989; Wentzel & Asher, 1995). Whether this commonly found positive association between feelings of belongingness and academic achievement is due to a direct or indirect effect is less clear, however. Most research assumes an indirect effect, and there is a substantial amount of corresponding literature demonstrating that feelings of belongingness are

related to achievement indirectly through engagement or motivation (see Anderson & Freeman, 2004; Osterman, 2000 for reviews).

Conversely, other studies assume a direct effect and have yielded mixed results regarding the direction of the relationship. For example, despite hypothesizing a positive direct relationship, Kennedy and Tuckman (2013) found a significant negative relationship between college students' grade point average and their perceived level of belongingness. In contrast, Anderman (2003) found a positive relationship between feelings of belongingness and achievement, albeit in the opposite direction. Instead of being positioned as a predictor, the dependent variable of interest in Anderman's study was feelings of belongingness, meaning that in her model grade point average positively predicted school belongingness.

Furthermore, previous literature has shown that different marginalized groups within schools have different academic and social experiences. Associations between feelings of belongingness and academic engagement and/or achievement have been suggested in research on the perceived educational experiences of students of different races, ethnicities, and immigrant statuses (e.g., Berhanu, 2005; Booker, 2007; Clark, Mercer, Zeigler-Hill, & Dufrene, 2012; Georgiades, Boyle, & Fife, 2013). In spite of this, the buffering effect of feelings of belongingness on the relationship between marginalization and academic achievement has yet to be empirically tested. As will be explained in more detail in the theoretical framework section later in this essay, this study presupposes that since feelings of belongingness constitute a basic psychological need (Baumeister & Leary, 1995), these positive feelings have the power to buffer the negative impact that being a member of a marginalized group can have on a child's academic performance. My study explores the moderating effect of feelings of belongingness on the

relationship between marginalization and academic achievement, which is a unique contribution of this study.

Another factor to consider regarding the relationship between feelings of belongingness and academic outcomes is the element of diversity, that is, diversity in terms of the contexts and student populations studied. The majority of prior research on this topic has been conducted in Western countries. A significant contribution of this study is to explore the relationship between feelings of belongingness and academic achievement in the understudied context of sub-Saharan Africa.

Overall, the presence of mixed results, inconsistencies in the ways that feelings of belongingness has been previously studied in relation to academic outcomes, and a general neglect of diversity in participants and in context in existing literature demonstrates that additional research is needed to more fully understand the relationship between feelings of belongingness and academic achievement. The present study contributes to existing literature by testing the direct effect of feelings of belongingness on academic achievement within three sub-Saharan African countries, as well as the buffering effect of feelings of belongingness on the relationship between marginalization and academic achievement. The unique contributions of this study include exploring these relationships in the understudied context of sub-Saharan Africa, as well as exploring the moderating effect of feelings of belongingness on the relationship between marginalization and academic achievement.

Marginalization in Education

This study will adopt the UNESCO (2010) definition of marginalization as, "a form of acute and persistent disadvantage rooted in underlying social inequalities" (p. 135). The social inequalities underlying marginalization are created and maintained by ingrained social,

economic, and political processes that operate throughout multiple spheres of society. The education system is one such sphere where marginalization takes place. Social reproduction theory demonstrates how schooling legitimizes and reproduces social, cultural, and economic divisions and classes (Anyon, 1981; Aronowitz & Giroux, 1985; Bowles & Gintis, 1976; Lareau, 1987). Furthermore, this study shares the conviction held by Amartya Sen (2009) that marginalization in education is a "clearly remediable injustice." The same social, economic, and political processes that create marginalization and injustice also have the power to reduce or eliminate it. This viewpoint is consistent with Durkheim's (1969) theory of social change which asserts that educational change is only possible if the social structure in which the social institutions of education are located changes. Thus, marginalization in schools can be changed if the greater social context is also changed.

Marginalization and academic achievement. Not surprisingly, marginalization generally has a negative impact on academic achievement. Returning to the definition of marginalization stated above, if a child experiences acute and persistent disadvantage rooted in social inequalities, their disadvantage will manifest itself in multiple forms across different social structures. Within the educational system, academic achievement is the hallmark indicator of success. So, if you are marginalized, than your ability to become academically successful will be inherently constrained by the social, economic, and political forces that collectively create and sustain your disadvantage. Literature illustrating the link between marginalization and academic disadvantage will be reviewed for multiple marginalized groups below. It should be noted that existing literature on marginalization in education is vast and diverse, and the literature reviewed here will be limited to marginalization on the basis of a child's gender, SES, home language, and immigrant status because these are the categories of marginalization that were explored in this

study. A challenge of research on marginalization in education is that it is difficult to measure exhaustively because national data are rarely detailed enough to identify all the different types of marginalized groups (UNESCO, 2010). Fortunately, the TIMSS 2011 data provides multiple cross-country markers of marginalization, all of which are analyzed in this study.[3]

Gender. Although girls are not always an educationally marginalized group and much progress has been made towards gender parity, in many countries being born a girl still carries with it a significant education disadvantage. Evidence of this disadvantage is reflected in the fact that 54% of out-of-school children are girls (UNESCO, 2010). This means that in many countries girls are less likely than boys to attend school. In terms of differences between primary and secondary school enrollment, 68 countries have not achieved gender parity in primary education, while 97 countries have not achieved gender parity in secondary education (UNESCO, 2012). So, the education disadvantage of girls increases with age. For girls who are fortunate enough to go to school, girls generally tend to perform as well as, or better than their male classmates (UNESCO, 2012). Thus at first glance, the issue of access appears to be characterized by greater inequalities compared to academic achievement when it comes to gender.

However, a closer examination of achievement differences between boys and girls reveals significant gender-based disparities by subject. A considerable amount of national and cross-national research has found that girls tend to be ahead of boys in reading and language but lag behind in mathematics and science (Johnson, 1996; Stephens et al., 2004). These gender gaps in subject achievement are found to be established in pre-adolescence and are then strengthened as students advance through their secondary schooling (Johnson, 1996). In line

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[3] Other large-scale international student assessment datasets such as the Progress in International Reading Literacy Study (PIRLS) also provide multiple cross-country markers of marginalization. However, TIMSS 2011 was selected for this study to maximize the number of sub-Saharan African countries examined.

with these findings, this study anticipates that boys will outperform girls in mathematics and science in the TIMSS 2011 eighth grade data since the participants are at an age where the gender gap is most striking in these particular subjects.

Socioeconomic status. Of all of the student factors which lead to marginalization in education, socioeconomic status (SES) is one of the most widely researched. In the literature SES has a long history as a correlate or predictor of academic outcomes (Coleman, 1966; Cuff, 1933; Holley, 1916; Sirin, 2005; White, 1982). Across such studies, the relationship between SES and academic outcomes is positive, such that students of high SES have high academic achievement and students of low SES have low achievement. Alexander and Simmons (1975) established that the impact of SES on academic achievement is not restricted to the U.S., where most research up to this point had been done. From the 1970s onwards, further cross-cultural research has shown that although the extent to which SES influences academic achievement in low-income countries may not be as large as in high-income countries like the U.S., the relationship between SES and academic achievement in low-income countries is nonetheless significant and is in the positive direction (Chiu, 2007; Chudgar & Luschei, 2009; Heyneman, 1976a, 1976b, 1979; Heyneman & Loxley, 1983; Nonoyama-Tarumi & Willms, 2010; Schiller, Khmelkov, & Wang, 2002). Since all sub-Saharan African countries participating in TIMSS 2011 are designated as low-income countries (International Monetary Fund, 2013), it is expected that a positive relationship between SES and academic achievement will be found in the present analysis, consistent with previous literature.

Home language. Language capital, also called mother-tongue, is the set of language skills that are acquired with minimal effort in childhood and are then strengthened in school (Chiswick & Miller 1995; Chiswick 1991). Children who do not speak their home language in

school are at risk of being marginalized compared to children whose home language is consistent with the primary language spoken at school. It is difficult for teachers and peers to communicate with students who are non-native speakers, which can have negative social and academic repercussions. For instance, Herbert, Hau, and Kong (2002) and Papanastasiou (2000) have shown that students who receive instruction in or are tested in their second language perform worse academically compared to native speakers. Additionally, an analysis of the TIMSS 2007 data by Martin, Mullis, and Foy (2008) revealed that students who reported sometimes speaking the language of the test at home had science test scores 10% lower than students who reported always speaking the language of the test at home, and the scores of students who reported never speaking the language of the test at home were 20% lower. Consequently, a similar relationship between home language and academic achievement is expected in this analysis, such that students who speak the language of the test at home more frequently will exhibit higher mathematics and science achievement compared to students who speak the language of the test at home less frequently.

Immigrant status. Migrant and immigrant children constitute yet another marginalized category of students in education. When a family immigrates to another country they are likely to experience one of several distinct paths of adaptation which either can lead to upward or downward social mobility (Portes & Rumbaut, 2006; Portes & Zhou, 1992; Zhou & Bankston, 1998). The role of education in the segmented assimilation paths can play an important role in attaining middle class status through educational achievement. However, this is no easy feat and rarely occurs before the second generation (Portes & Fernandez-Kelly, 2008; Glick & Hohmann-Marriott, 2007). In studies on the academic performance of immigrant students, there is evidence of an achievement gap between students who are born in the country (i.e., native

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students) compared to students who have immigrated to the country (i.e., immigrant students) (Brown, 2006; Schnepf, 2004). The size of this achievement gap can be quite substantial. For instance, a study using the Programme for International Student Assessment (PISA) data found a 1.5 year lag in achievement between immigrant students and their native counterparts (OECD, 2007). While these studies have focused on high-income countries, a similar effect of immigrant status on academic achievement is expected in this study.

Why Sub-Saharan Africa?

Geographically, sub-Saharan Africa generally consists of all African countries that lie south of the Sahara Desert (UN, 2013). The multifaceted economic, political, and social challenges that are faced by this region of the world informed my motivation to focus my analysis on Botswana, Ghana, and South Africa, and will be elaborated on below. Sub-Saharan Africa is an important context to study the buffering effect of feelings of belongingness on the relationship between marginalization and academic achievement for two primary reasons that will be explained below.

Low academic achievement. First, academic achievement is relatively low in this region compared to the rest of the world. Of all the regions of the world, sub-Saharan Africa seems to consistently fare less well compared to others in terms of their progress towards EFA goals. For example, in terms of universal primary education, South and West Asia and sub-Saharan Africa started from similar positions in 1999 with approximately 40 million primary aged out-of-school children, and by 2008 this amount dropped by 26 million in South and West Asia but only by 13 million in sub-Saharan Africa (UNESCO, 2012). In addition to access, education quality indicators are also generally much lower in sub-Saharan Africa compared to

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other regions (Dembélé & Lefoka, 2007; Johnson & Beinart, 2008; Van Fleet, Watkins, & Greubel, 2012; Verspoor, 2008).

The global perception that sub-Saharan Africa is "behind" in terms of its educational development is not a new one. There are many possible reasons as to why educational development in sub-Saharan Africa seems to be lagging. One such explanation offered by Abdi, Puplampu, and Dei (2006) is that the deleterious effect on educational development in sub-Saharan Africa is due to globalization and neo-colonialism. The lack of a political will and financial problems have also been suggested as important contributors to the failure of EFA in developing contexts (Heyneman, 2009). Regardless of the reason, there is clearly an established need for improvement and a great potential for change in advancing the learning outcomes of children in sub-Saharan African countries.

Widespread marginalization. Undeniably, sub-Saharan African education systems are faced with many challenges in the context of economic hardships, conflict and HIV/AIDS, inadequate numbers of qualified teachers, under resourced classrooms and school buildings, and the unavailability of learning materials (e.g., Dembélé & Oviawe, 2007; Sifuna, 2007; Verspoor, 2008). These challenges are further compounded by the added challenge of broadening access and quality learning opportunities to "hard to reach" children such as those living in remote areas or children of nomadic families (Dembélé & Oviawe, 2007). Due to the many challenges faced by sub-Saharan African education systems, many children in this context live on the margins of society and experience educational inequalities.

This leads to the second reason that sub-Saharan Africa is a valuable context to focus on in this study: the fact that marginalization is extremely prevalent and takes on many different forms in the region. It is important for research like this study to explore the nuances involved in

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educational marginalization because it is applicable to the lives of so many children and has the potential to have a far reaching impact. The widespread nature of marginalization is due to the extreme and persistent educational inequality that leaves many groups of the society marginalized in this region of the world. Numerous populations have been identified as marginalized or disadvantaged in sub-Saharan African education systems, such as girls, children living in poverty, children living in rural areas, children displaced by conflict, aboriginal children, immigrant children, children with disabilities, and ethnic, linguistic, and religious minorities. Watkins (2013) identifies the most educationally marginalized children in Africa as the rural poor, young girls from disadvantaged homes, slum dwellers, and pastoralists. Literature specific to the sub-Saharan African context for each of the categories of marginalization included in this study is briefly reviewed below to contextually situate the analysis.

Gender. In many sub-Saharan African countries, it is not uncommon to hear stories about women and girls being subjected to abuse, exploitation, and oppression at the hands of males (e.g., Baker, 2010; Jewkes & Abrahams, 2002; UNICEF, 2011). The economic and social positions of women in African societies in relation to men are related to gender relations in the household, school, labor market, and society. This is referred to as the 'gender stratification hypothesis' proposed by Baker and Jones (1993) which maintains that gender differences in achievement are closely related to the cultural and societal opportunity structures for girls and women. Else-Quest, Hyde, and Linn (2010) recently found empirical support for this hypothesis using the TIMSS and PISA 2003 data. Else-Quest et al. found that gender equity in school enrollment, women's share of research jobs, and women's parliamentary representation were the most powerful predictors of cross-national variability in gender gaps in mathematics.

Unique to the African context, Colclough, Al-Samarrai, Rose, and Tembon (2003) explain that a notable influence on the basis and reproduction of male power is the rural-urban migration in Africa of predominantly males whilst females remained secluded in home villages and economically dependent. The authors go on to describe how patriarchy and capitalism also play a role, as the economic incentives are lower to educate girls due to lower prospective salaries despite similar qualifications, as well as higher perceived costs by parents due to the lost labor associated with sending girls to school since girls traditionally play a larger role in housework. In the context of poverty, girls are needed for the heavy labor required for essential daily activities such as subsistence farming and transporting water and fuel.

Within this larger social and economic context in relation to gender dynamics, girls are generally educationally disadvantaged in sub-Saharan Africa. This is evidenced by the fact that the vast majority of countries where girls face severe educational disadvantage, as measured by a gender parity index (GPI) of less than 0.90, are in sub-Saharan Africa (UNESCO, 2012). This pattern holds true at both the primary and secondary school levels, although it is important to highlight that the incidence of severe gender disparity is higher at the secondary level compared to the primary level. Given that this study analyzed eighth grade data, recent GPI figures for lower and upper secondary education for each of the three sub-Saharan African countries are listed in Table 2.1. Based on these figures it appears that girls in Ghana have the worst access to secondary school out of the three countries, while girls in Botswana and South Africa fare better. Some issues related to access for girls include the absence of safe, sanitary toilet facilities as well as being at an increased risk for sexual abuse and early pregnancy, which impact attendance and dropout rates (Datta, Phillip, & Verma, 2009).

Table 2.1
GPI of Countries Included in Study

	Lower Secondary	Upper Secondary
Botswana	1.05	1.09
Ghana	0.93	0.87
South Africa	1.01	1.08

Note. Figures based on 2010 data presented in the UNESCO (2012) *Education for All Global Monitoring Report*. GPI = gender parity index; a measure of relative access to education for males and females.

Regarding the academic performance in the three sub-Saharan African countries that were explored in this study, previous research suggests that the majority of the countries exhibit a gender gap in mathematics achievement in favor of boys. For example, the effect sizes for gender differences in mathematics achievement computed by Etse-Quest et al. (2010) were -0.04 for Botswana, 0.19 for Ghana, and 0.02 for South Africa. Positive values represented higher scores for boys than girls, meaning that girls seem to be educationally disadvantaged in all countries except Botswana. However, the most recent data from the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMAQ) shows that boys significantly outperformed girls in mathematics in Botswana and South Africa after controlling for all other significant factors (Hungi, 2011). In fact, the gender gap was even larger in Botswana (-2.7) compared to South Africa (-0.8). Note that SACMEQ does not collect data in Ghana. Due to inconsistencies in the direction of the gender gap in mathematics achievement, further research is needed.

Socioeconomic status. Sub-Saharan Africa is the poorest region of the world. All three sub-Saharan African countries included in this study are classified as low-income countries, or what the International Monetary Fund (IMF, 2013) calls 'emerging market and developing economies' (EMDEs). Of the 153 countries with the EMDE designation, 45 are in sub-Saharan

Africa. This region only accounts for 2.5% of the world's gross domestic product (GDP) and exports 2.1% of the world's goods and services, yet is home to 12.3% of the world's population (IMF, 2013). Annual growth in GDP is projected for 2013 for the three sub-Saharan African countries included in this study at rates of 4.1% for Botswana, 6.9% for Ghana, and 2.8% for South Africa (IMF, 2013). Even so, poverty continues to be a perpetual issue for this region of the world and in these countries.

Education is reflective of economic and social inequalities inherent with poverty and family background. As stated previously, the effect of SES on students' academic performance is a relationship that has been well established across the globe (Hanushek & Luque, 2002; Wöβmann, 2003; Sirin, 2005; Ammermüller, Heijke, & Wöβmann, 2005; Engin-Demir, 2009; Martins & Veiga, 2010). Likewise, evidence of educational disadvantage on the basis of a child's SES has been found in studies focused on the countries included in this study's analysis, whereby inequalities in school attainment and academic performance have been associated with household poverty and parent education (Bouhilia, 2011; Frempong, Reddy, & Kanjee, 2011; Lloyd & Hewett, 2009; Timaeus, Simelane, & Letsoalo, 2013). Children from disadvantaged backgrounds in the countries of the present study are not exempt from the risks of being less successful in school. It is anticipated that this pattern will hold true in the present study as well.

Home language. Due to the colonial history of Africa, the languages of Europe (English, French, Dutch, Spanish, and Portuguese) have been and continue to be the languages of power (Brock-Utne & Holomarsdottir, 2004; Alexander, 2000). In modern day Africa, knowing the language of the conqueror is a marker of privilege for the middle and upper class, meaning that the language issue is a class issue. Table 2.2 lists the languages of all three countries included in the present study. The countries' languages are divided according to those of past colonizers

versus vernacular or native languages to illustrate that colonial languages still hold a prominent

position in the multilingual fabric of the countries today.

Table 2.2
Languages of Countries Included in Study

	Colonizer Language(s)	Vernacular Languages
Botswana	English[a]	Setswana, Kalanga, Sekgalagadi
Ghana	English[a]	Asante, Ewe, Fante, Boron, Dagomba, Dangme, Dagarte, Akyem, Ga, Akuapem
South Africa	English[a], Afrikaans[a] (a Dutch dialect)	IsiZulu[a], IsiXhosa[a], IsiNdebele[a], Sepedi[a], Sesotho[a], Setswana[a], siSwati[a], Tshivenda[a], Xitsonga[a]

Note. Source of data used to create table is "Field Listing: Languages," by the Central Intelligence Agency, 2013, retrieved from The World Factbook website: https://www.cia.gov/library/publications/the-world-factbook/fields/2098.html.
[a] Official language(s) of country.

In many African countries it is quite common for children to be taught and tested in

languages they do not speak at home, which has negative implications for learning (Brock-Utne

2001, 2010; Brock-Utne & Holomarsdottir, 2004). The countries examined here are no

exception to this practice. For example, Opoku-Amankwa (2009) found that Ghana's English-

only language-in-education policy negatively influenced student learning by creating anxiety and

reducing classroom participation. Similarly, in their investigation of language use and

preferences of children and parents in Botswana, Arua and Magocha (2002) found that Setswana

is the language of the home and English is the language of the school for the vast majority of

students. Furthermore, this pattern of language use was found to be consistent with parent

preferences and educational policy. English also dominates as the language of access and power

in South Africa, as the majority of African students speak their native language in their home and

communities, while having little direct contact with English outside of school (PANSALB, 2000;

Probyn, 2006; Probyn et al., 2002). Research has established that the majority of South African

students do not have the necessary English language proficiency to successfully engage with the curriculum, which leads to marginalization and an inability to communicate knowledge in the language of the test (Howie, 2001; McKay & Chick, 2001; Posel & Zeller, 2011; Probyn, 2006). Given these educational issues surrounding language in the African context and the detrimental effect of marginalization in the form of language on academic outcomes, it is expected that infrequent speaking of the language of the test at home will have a similar effect on mathematics and science outcomes in the TIMSS 2011 data.

Immigrant status. Numerous African countries have absorbed millions of children displaced by conflict, which places additional strain on educational systems (UNESCO, 2010). In terms of contemporary migration within Africa, the dominant trend is North-South emigration largely motivated by economic reasons (Appleyard, 1992; Oucho, 1995). Unskilled laborers are predominantly drawn to the mining areas of South Africa. An unfortunate consequence of migration is xenophobia due to nationalism and economic factors. In the African context characterized by limited resources, immigrants are seen as competing with locals for land and economic opportunities (Kerting, 2009). In Ghana for example, migrants were victimized as "Zombies" (Nyamjoh, 2006) and mass expulsions of aliens was based on ethnic nationalist criteria (Whitacker, 2005). Evidence of widespread xenophobia has also been found in Botswana and these negative attitudes also appear to be influenced by nationalism and economic factors (Campbell, 2003; Nyamnjoh, 2006; van Dijk, 2002).

Of the three countries included in the present study, there is the greatest amount of research on immigrants in South Africa, which will be explored in more detail here. Xenophobia is a large problem in South Africa and concerns have been rising with increased instances of xenophobic violence since the 1990s (Neocosmos, 2006; Nyamnjoh, 2006). In a nationwide

survey, Mattes, Taylor, McDonald, Poore, and Richmond (1999) found that 25% of South Africans support a total ban on immigration and 45% support strict limits on the number of immigrants allowed in. This hostility is also seen in relation to the education system as well, as 39% of South Africans opposed granting foreign children equal access to education and only 37% supported it (Mattes et al., 1999). The social context in which immigrants are received is a major factor related to successful assimilation; a hostile reception by the public and authorities makes it very difficult for immigrant families to become educated and acquire new occupational skills (Portes & Fernandez-Kelly, 2008). Thus, the presence of such negative attitudes by South Africans has the potential to threaten the academic success of immigrant children. While there is a limited amount of research in this area, a study on the socio-cultural experiences of Black female immigrant students in South Africa by Vandeyar and Vandeyar (2011) found that the immigrant students experienced discrimination, harassment, and attrition. This study anticipates that the educational disadvantage of immigrants will be found in the TIMSS 2011 data in the form of a direct effect of immigrant status on academic achievement, and that feelings of belongingness can buffer this effect of marginalization on the basis of immigrant status.

Overall, girls, students of low SES, students who infrequently speak the language of the test at home, and immigrant students appear to be at risk of being educationally disadvantaged in the sub-Saharan African countries included in this analysis. Given the contextual circumstances reviewed above, it is especially important to understand the process of marginalization in relation to academic achievement and how feelings of belongingness can serve as a buffer to be able to enact change and enhance the outcomes of disadvantaged children in sub-Saharan African countries. Additionally, to acknowledge the role of context, similarities and differences in the

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relationships between feelings of belongingness, marginalization, and academic achievement

will be compared across the three countries to explore cross-national variation.

Theoretical Framework

The theoretical framework of this study draws from the social sciences of psychology and

sociology. To be clear in how theory from each respective discipline is incorporated into the

theoretical conceptualization of my study, this section is divided into two parts. The first

subsection describes how the study connects psychological theory on feelings of belongingness

to the educational context. The second subsection is devoted to applying labeling theory, which

is rooted in sociology. This section closes with a summary paragraph that brings the theories

together and presents my conceptual model.

Psychological Theory on the Need to Belong

The theoretical framework of this study connects psychological theory on feelings of

belongingness to the educational context. Theory concerning feelings of belongingness is rooted

in the field of psychology. Maslow's hierarchy of needs (originally published in his 1943 paper

and more fully expressed in his 1954 book) serves as the theoretical foundation for this area of

research. In Maslow's hierarchy of needs, feelings of love and belongingness constitute the third

level of human needs after physiological and safety needs are fulfilled. Maslow argued that all

humans need to feel a sense of belongingness among their social groups, and that this need of

belongingness is especially strong in children.

Relating theory on feelings of belongingness to an educational context, students need to

feel a sense of belongingness in their school for their basic psychological wellbeing. This study

will use the definition of feelings of belongingness provided by Hagerty, Lynch-Sauer, Patusky,

Bouwsema, and Collier (1992) as, "the experience of personal involvement in a system or

environment so that persons feel themselves to be an integral part of that system or environment"
(p. 173). Applying this definition to the field of education, the system or environment of interest
is the setting where formal education takes place, which is the school. Students themselves need
to feel that they are an integral part of their school.

One of the many benefits of feeling like you belong at school is improved academic
performance. Osterman (2000) offers a helpful social cognitive theoretical perspective which
posits that students have psychological needs, the satisfaction of those needs impacts their
perceptions and behaviors, and the characteristics of the social context influences how well these
needs are met. Applying this reasoning to the link between feelings of belongingness and
academic achievement, feelings of belongingness constitutes a basic psychological need and
academic achievement can be conceptualized as the result of student perceptions and behaviors.
Thus, it can be theoretically reasoned that student perceptions of their feelings of belongingness
are related to their academic achievement.

Going one step further, the theoretical framework of this study contends that
marginalization is a consequence of the social context that Osterman (2000) stressed as
influencing how well the need to belong is met and the resulting behaviors related to a child's
enhanced academic performance. As stated previously, the social inequalities underlying
marginalization are created and maintained by social, economic, and political processes that
operate within the education system. Thus, taking into account the role of context like Osterman
recommends encourages us to consider how being marginalized interacts with feelings of
belongingness and the resultant academic performance. Regardless of their individual
background or characteristics, having all students come together and feel that they belong in their

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school is one of the impetuses behind desegregation and inclusion initiatives (Kunc, 1992), which has implications for the marginalized groups in this study.

Labeling Theory

In addition to extending psychological theory on feelings of belongingness to the educational context, an additional component of this study's theoretical framework is labeling theory. Major contributors to the development of labeling theory include Becker (1963, 1964), Lemert (1951, 1972, 1974), Matza (1964, 1969), and Tannenbaum (1938). Labeling theory has its origins in sociology in the study of social deviance and the self-fulfilling prophecy, and has extended into the fields of education and disability studies (Fitch, 2002; Rist, 1977). Tannenbaum (1938) first introduced the idea of 'tagging' based on his finding that a negative tag or label would contribute to further involvement in the delinquent activities of youth. This early idea concerning the influence of socially imposed labels on behavior has expanded to include the impact of labels on self-identity. A central tenant of labeling theory is that, "Labels are applied to individuals which fundamentally shift their definitions of self and which further reinforce the behavior which had initially prompted the social reaction," (Rist, 1977, p. 302).

Applying labeling theory to the concept of marginalization, being deemed 'marginalized' or a member of a marginalized group (e.g., 'immigrant,' 'disabled') is in essence a form of labeling. Labels of marginalization assigned by the larger society to minorities or those who are viewed as deviating from the norm can carry stigma and negative social meanings. In the case of marginalization in education, a common metric of deviance from the cultural norm is academic achievement. As such, a child's failure to succeed academically can be perceived as a form of deviance. Labeling theory would argue that if children internalize the negative label and see themselves as marginalized and at risk of academic failure, this would in turn contribute to poor

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academic achievement. Alternatively, labels may also have the power to illicit positive outcomes. For example, in special education disability labels can provide children with access to individualized services that can support their academic development. Labels are no doubt a complex social phenomenon that can operate in multiple ways within the school setting.

Whether labels have negative or positive connotations associated with them, it is important to highlight that the pervasive assumptions which are attached to a label can be challenged. For example, Goodley (2001) argues for a reconsideration of impairment in relation to the label 'learning difficulties.' In his presentation of inclusive epistemological foundations, Goodley advocates that we deconstruct impairment by exposing the social nature of diagnostic criteria and by destabilizing the naturalized notions of 'learning difficulties.' Applying Goodley's advice, marginalization can be deconstructed by exposing the ways that the system sets these students up to fail and by destabilizing the notion that marginalized student groups academically underperform. A child who is a member of a marginalized group can challenge their label by academically succeeding. I argue that feelings of belongingness can assist in this process, because if a child feels like they belong at their school this reduces the likelihood that marginalization becomes a defining part of their self-identify and that they will behave in a way which reinforces their label. If a child does not perceive himself or herself as being marginalized since they feel like they belong, this places the child in a positive psychological state that is conducive to academic success. On the other hand, if the child does not feel like they belong this can exacerbate the negative impact of their label of marginalization on their academic performance and self-identity.

Overall, this study presupposes that because feelings of belongingness are such a basic psychological need (Baumeister & Leary, 1995; Maslow, 1943, 1954), these feelings have the

power to buffer the negative impact that being a member of a marginalized group can have on a child's academic success. Even if a student is a member of a marginalized group at risk of academic failure, if the student feels like they belong at their school, than this will help them perform well academically. Feelings of belongingness can serve to challenge negative feelings of the self and academic behaviors that are associated with the label of marginalization. Figure 2.1 depicts my conceptual model illustrating the relationships between feelings of belongingness, marginalization, and academic achievement. Specifically, Figure 2.1 shows the direct effects of feelings of belongingness and marginalization on academic achievement, as well as the buffering effect of feelings on belongingness on the relationship between marginalization and academic achievement.
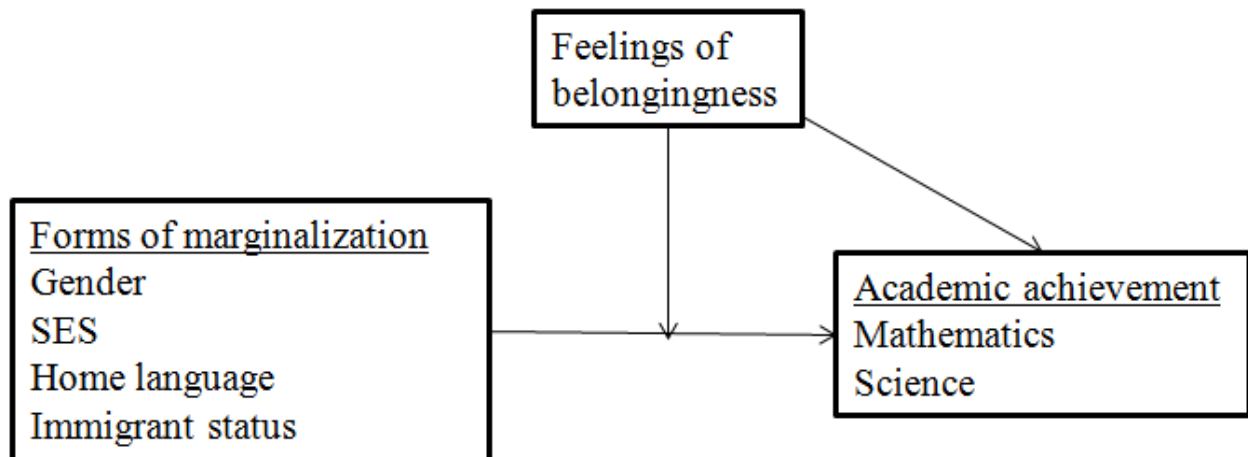
Figure 2.1. Conceptual model.

Research Questions and Hypotheses

To test the relationships between feelings of belongingness, marginalization, and academic achievement, the following research questions are asked:

RQ1. How are feelings of belongingness associated with mathematics and science achievement?

RQ2. How are categories of marginalization associated with mathematics and science achievement?

RQ2a. How is gender associated with mathematics and science achievement?

RQ2b. How is SES associated with mathematics and science achievement?

RQ2c. How is home language associated with mathematics and science achievement?

RQ2d. How is immigrant status associated with mathematics and science achievement?

RQ3. Do feelings of belongingness buffer the relationship between categories of marginalization and mathematics and science achievement?

RQ3a. Do feelings of belongingness buffer the relationship between gender and mathematics and science achievement?

RQ3b. Do feelings of belongingness buffer the relationship between SES and mathematics and science achievement?

RQ3c. Do feelings of belongingness buffer the relationship between home language and mathematics and science achievement?

RQ3d. Do feelings of belongingness buffer the relationship between immigrant status and mathematics and science achievement?

RQ4. How do the relationships investigated between feelings of belongingness, categories of marginalization, and mathematics and science achievement differ across the three sub-Saharan African countries participating in TIMSS 2011?

Table 2.3 lists the hypotheses that correspond to Research Questions 1 through 3. Note that all hypothesized relationships are anticipated to hold true for both mathematics and science

achievement. Research Question 4 is exploratory in nature (i.e., no hypothesis was made for

RQ4) due to the absence of existing literature on the nature of the relationships between feelings

of belongingness, categories of marginalization, and academic achievement in sub-Saharan

African countries.

Table 2.3
Hypotheses

Corresponding RQ	Hypothesis #	Relationship	Direction
RQ1	*H1*	Feelings of belongingness will be associated with variation in achievement	+
RQ2	*H2a*	Gender will be associated with variation in achievement	Being a girl will be associated with lower achievement
	H2b	SES will be associated with variation in achievement	+
	H2c	Home language will be associated with variation in achievement	Infrequent speaking of the language of the test at home will be associated with lower achievement
	H2d	Immigrant status will be associated with variation in achievement	Being an immigrant will be associated with lower achievement
RQ3	*H3a*	Feelings of belongingness buffers the relationship between gender and achievement	Being a girl will be less strongly associated with lower achievement if the student feels like she belongs
	H3b	Feelings of belongingness buffers the relationship between SES and achievement	Being of lower SES will be less strongly associated with lower achievement if the student feels like they belong
	H3c	Feelings of belongingness buffers the relationship between home language and achievement	Infrequent speaking of the language of the test at home will be less strongly associated with lower achievement if the student feels like they belong
	H3d	Feelings of belongingness buffers the relationship between immigrant status and achievement	Being an immigrant will be less strongly associated with lower achievement if the student feels like they belong

Data and Method

The TIMSS 2011 data set was used in the present study. Since 1995, TIMSS has measured trends in mathematics and science achievement of fourth and eighth grade students in participating countries all over the world. TIMSS 2011 is the fifth and most recent data collection organized by the International Association for the Evaluation of Educational Achievement (IEA) in the TIMSS cycle of studies that have been conducted every four years in 1995, 1999, 2003, 2007, and 2011. The TIMSS database comprises student achievement, student, home, teacher, school, and curricular background data for 77 participating jurisdictions (63 countries and 14 benchmarking participants) all over the world (Foy, Arora, & Stanco, 2013). In total, the database contains data from 608,641 students (Foy et al., 2013). These students were selected using a two-stage random sample design in each participating jurisdiction, where a sample of schools is drawn at the first stage and one or more intact classroom of students is sampled at the second stage (Jonas & Foy, 2012).

Instruments

The TIMSS 2011 international database contains data from contextual questionnaires and student assessments. As part of the TIMSS 2011 assessment, participating fourth and eighth grade students complete grade-level mathematics and science assessments and a student questionnaire, their parents complete a home questionnaire, their teachers complete a teacher questionnaire, their school principals and department heads complete a school questionnaire, and the TIMSS 2011 national research coordinators complete a curriculum questionnaire.

For this study, data from the student questionnaire, student assessments, teacher questionnaire, and school questionnaire were used. The student questionnaire asks about various aspects of students' home and school lives, including basic demographic information, their home

environment, their school learning climate, and their self-perceptions and attitudes toward learning mathematics and science (Foy et al., 2013). Regarding the student assessment instruments, to assess a wide range of topics in mathematics and science, a matrix-sampling booklet design was used where each student is only administered a subset of the entire TIMSS mathematics and science item pools (Martin & Mullis, 2012). TIMSS 2011 test booklets contain items which are designed to assess multiple content and cognitive domains in mathematics and science. The eighth grade content areas for mathematics include numbers, algebra, geometry, data and chance, and the content areas for science include biology, chemistry, physics, and earth science. For both mathematics and science, the cognitive domains include knowing, applying, and reasoning. These content and cognitive domains serve as the foundation of the TIMSS 2011 assessments (Mullis, Martin, Ruddock, O'Sullivan, & Preuschoff, 2009). Lastly, the teacher questionnaire asks about teachers' background and their teaching practices, and the school questionnaire asks about the school environment, programs, and resources.

Variables

Table 2.4 provides a complete list of variables from the TIMSS 2011 dataset that were used in my analysis. Details for each of the variables are provided in Table 2.4, including the TIMSS 2011 general/integrated variable name and variable description. Below, each of the variables is explained.

Table 2.4
Variable Details

Variable	TIMSS 2011 Variable Name	Description
Student mathematics achievement	BSMMAT01BSMMAT02BSMMAT03BSMMAT04BSMMAT05	Five plausible values
Student science achievement	BSSSCI01 BSSSCI02 BSSSCI03 BSSSCI04 BSSSCI05	Five plausible values
Student age	BSDAGE	Age in years
Student gender	BSBG01	Dichotomous dummy variable indicating boy or girl
Student time spent on math homework per week	BSDMWKHW	Categorical variable indicating 3 hours or more, more than 45 minutes but less than 3 hours, or 45 minutes or less*
Student time spent on science homework per week	BSDSWKHW	Categorical variable indicating 3 hours or more, more than 45 minutes but less than 3 hours, or 45 minutes or less*
Student home language	BSBG03	Categorical variable indicating always, almost always, sometimes, or never speak language of test at home*
Student immigrant status	BSBG09A	Dichotomous dummy variable indicating whether born in country or not
Student SES (Home Educational Resources Scale)	BSBGHER	Derived scale variable ranging from few to some to many resources
Student likes mathematics (Students Like Learning Mathematics Scale)	BSBGSLM	Derived scale variable ranging from do not like to somewhat like to like learning mathematics
Student likes science (Students Like Learning Science Scale)	BSBGSLS	Derived scale variable ranging from do not like to somewhat like to like learning science
Student values mathematics (Students Value Mathematics Scale)	BSBGSVM	Derived scale variable ranging from do not value to somewhat value to value mathematics

Table 2.4 (cont'd)

Variable	TIMSS 2011 Variable Name	Description
Teacher experience	BTBG01	Experience teaching in years
Teacher gender	BTBG02	Dichotomous dummy variable indicating male or female
Teacher age	BTBG03	Categorical variable indicating under 25, 25-29, 30-39, 40-49, 50-59, or 60 or more years
Teacher education level	BTBG04	Categorical variable indicating did not complete <ISCED level 3>, finished <ISCED level 3>, finished <ISCED level 4>, finished <ISCED level 5b>, finished <ISCED level 5b, first degree>, or finished <ISCED level 5b, second degree> or higher
School urbanicity	BCBG05A	Categorical variable indicating more than 500,000, 10,001 to 500,000, 50,001 to 100,000, 15,001 to 50,000, 3,001 to 15,000, or 3,000 or fewer people live in the city, town or area where the school is located*

Note. BTBG04 variable responses consisted of nationally defined options that varied slightly across the countries and were recoded for international comparability. To provide an example, Botswana's response set for the teacher education level variable is: did not complete senior secondary, finished senior secondary, finished vocational/technical certificate, finished diploma, finished first degree, and finished Master's degree or higher.
SES = socioeconomic status. *Variable was reverse coded.

Academic achievement. The dependent variables in this study are students'

mathematics and science achievement. The BSMMAT01, BSMMAT02, BSMMAT03,

BSMMAT04, and BSMMAT05 variables were used as indicators of overall mathematics

achievement, and the BSSSCI01, BSSSCI02, BSSSCI03, BSSSCI04, BSSSCI05 variables were

used as indicators of overall science achievement. Based on student responses from 14

mathematics and science test booklets, five estimates of each student's achievement score known

as "plausible values" were computed using Item Response Theory (IRT) scaling methodology

(see Martin & Mullis, 2012 for a detailed description of the TIMSS 2011 scaling approach). The

variables listed above are the five plausible values that equally represent a student's achievement

in mathematics and in science. The TIMSS 2011 user manual states, "The plausible values for any given scale are the best available measures of student achievement on that scale in the TIMSS 2011 International Database, and should be used as the outcome measure in any study of student achievement" (Foy et al., 2013). Accordingly, the five plausible value variables for mathematics and science achievement were used as the academic outcome dependent variables. The scale of these plausible achievement values ranges from 0 to 1,000, with a mean score of 500 and a standard deviation of 100.

Indicators of marginalization. Responses from individual items in the student questionnaire and a derived variable provided by IEA were used as indicators of marginalization in my analyses. Three individual items were used as independent variables to indicate marginalization on the basis of a child's gender (BSBG01), home language (BSBG03), and immigrant status (BSBG09A). Gender is a categorical variable where students were asked to report whether they are a girl or a boy. Home language is an ordinal variable where students were asked to rate the frequency they speak the language of the test at home on a 4-point Likert scale (always; almost always; sometimes; never). Responses to the home language item were recoded to create a categorical variable consisting of two groups: (1) infrequent speaking of the language of the test at home (sometimes and never) and (2) frequent speaking of the language of the test at home (always and almost always) to aid in the interpretation of my results. Immigrant status is a categorical variable where students were asked to report whether they were born in the participant country or not. Students who reported being born in the country were coded as non-immigrants and students who reported being born outside of the country were coded as immigrants.

A derived index variable was used as an independent variable to indicate the fourth category of marginalization included in the analysis, which is SES.   The derived index variables provided by IEA is the combination of responses from multiple questionnaire items and are more reliable than the component questions (Akyüz & Berberoğlu, 2010). The particular derived variable that will be used in this analysis is called the Home Educational Resources (HER) scale. The HER scale is a learning-specific metric of SES computed using IRT that was designed to be internationally comparable. The HER scale is based on student responses concerning the availability of three home resources, namely parent education, number of books in the home, and number of study supports (i.e., own room and/or internet connection) (Martin & Mullis, 2012). The HER scale rates students as having few, some, or many resources. In this study, the HER scale and will be used as a proxy for SES as a form of marginalization as an independent variable.

Feelings of belongingness. One item from the student questionnaire was used to indicate feelings of belongingness (BSBG12C). Feelings of belongingness is an ordinal variable[4] where students were asked to rate the extent to which they agree that they feel like they belong at their school on a 4-point Likert scale (agree a lot; agree a little; disagree a little; disagree a lot). This item was reverse coded so that higher scores on the item indicate higher feelings of belongingness. Feelings of belongingness was entered into the model as an independent variable to test its direct effect on academic achievement, as well as its buffering effect on the relationship between categories of marginalization and academic achievement.

Control variables. At the school level, an individual item from the school questionnaire was used to control for the effect of urbanicity (BCBG05A). At the classroom level, individual

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[4] Although feelings of belongingness is technically an ordinal variable, in this study it was treated as a continuous variable because feelings of belongingness is conceptually a continuous phenomenon and in the social sciences Likert scale data is commonly treated as continuous.

items from the teacher questionnaire were used to control for the effects of teacher experience

(BTBG01), gender (BTBG02), age (BTBG03), and education level (BTBG05). At the student

level, individual items from the student questionnaire were used to control for the effects of

student age (BSDAGE) and time spent on homework (BSBMWKHW; BSBSWKHW).

Additionally, derived subject-specific index variables were used to control for students' liking of

the subject (BSBGSLM; BSBGSLS), value of the subject (BSBGSVM; BSBGSVS), and self-

confidence in the subject (BSBGSCM; BSBGSCS)[5].

Sample

      This study analyzed the TIMSS 2011 eighth grade student data from the three

participating sub-Saharan African countries, namely Botswana, Ghana, and South Africa. The

rationale for analyzing the eighth grade data as opposed to the fourth grade data was to include

the maximum number of sub-Saharan African countries participating in TIMSS 2011, because

only one of the three countries collected data for fourth grade students (see Table 2.5).

Table 2.5
Sub-Saharan African Countries Participating in TIMSS 2011

	Assessment	
	4th grade	8th grade
Botswana	✓	✓
Ghana		✓
South Africa		✓

Note. Botswana and South Africa administered the fourth and eighth grade assessments to their sixth and ninth grade students. Adapted from "Countries," by the National Center for Education Statistics, 2013, retrieved from the U.S. Department of Education Institute of Education Sciences website https://nces.ed.gov/timss/countries.asp.

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[5] Two variables are listed because one refers to mathematics and the other to science.

It should be noted that Botswana and South Africa elected to administer the eighth grade

assessments to their ninth grade students because it was expected that the eighth grade students

would find the assessments too difficult (Mullis, Martin, Foy, & Arora, 2012). The average

TIMSS 2011 mathematics and science scores for all sub-Saharan African countries fell below the

TIMSS scale centerpoint (500), mostly falling below the Low (400) International Benchmark

(refer to Table 2.6 for average TIMSS 2011 mathematics and science scores for each of the three

countries). Of the three countries, Ghana had the lowest TIMSS 2011 mathematics and science

average achievement scores and Botswana had the highest.

Table 2.6

Country Descriptive Statistics

	TIMSS 2011 Average Achievement Score*		Number of Students in Sample			Mean Age	Mean SES	Number of Students who Frequently Speak Language of Test at Home	Number of Students who are Immigrants	Average Feelings of Belongingness
	Math	Science	Total	Male	Female					
Botswana	397 (2.5)	404 (3.6)	5,400	2,628	2,772	15.84 (.90)	8.43 (1.84)	625	298	3.73 (.61)
Ghana	331 (4.3)	306 (5.2)	7,323	3,822	3,501	15.74 (1.51)	7.96 (1.89)	2,041	530	3.42 (.89)
South Africa	353 (2.5)	332 (3.7)	11,966	6,078	5,888	15.93 (1.17)	8.91 (1.89)	3,986	2,204	3.32 (.91)

Note. Standard deviations appear in parentheses.

*Data from Mullis et al. (2012) and Martin et al. (2012).

The total sample size for Botswana was 5,400 students (48.7% male, 51.3% female). Of these, only 625 students frequently spoke the language of the test at home (11.6%) and 298 students were immigrants (5.5%). The age of students ranged from 10.25 to 19.58 years ($M = 15.84$, $SD = .90$). On average, students were of low SES ($M = 8.43$, $SD = 1.43$) and reported high feelings of belongingness at their school ($M = 3.73$, $SD = .61$).

The total sample size for Ghana was 7,323 students (52.2% male, 47.8% female). Of these, only 2,041 students frequently spoke the language of the test at home (27.9%) and 530 students were immigrants (7.2%). The age of students ranged from 9.67 to 18.92 years ($M = 15.74$, $SD = 1.51$). On average, students were of low SES ($M = 7.96$, $SD = 1.89$) and reported high feelings of belongingness at their school ($M = 3.42$, $SD = .89$).

The total sample size for South Africa was 11,966 students (50.8% male, 49.2% female). Of these, only 3,986 students frequently spoke the language of the test at home (33.3%) and 2,204 students were immigrants (18.4%). The age of students ranged from 10.00 to 19.92 years ($M = 15.93$, $SD = 1.17$). On average, students were of low SES ($M = 8.91$, $SD = 1.89$) and reported high feelings of belongingness at their school ($M = 3.32$, $SD = .91$). Table 2.5 presents the distribution of the Botswana, Ghana, and South Africa TIMSS 2011 student samples by gender, SES, home language, and immigrant status.

Data Preparation

To prepare the data for the subsequent analysis, all continuous variables[6] were grand mean centered[7] and all categorical variables were dummy coded. Specifically, gender was

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[6] The predictors of interest that were mean centered include feelings of belongingness and SES. The controls that were mean centered include school urbanicity, teacher experience, teacher age, teacher education level, student age, student time spent on homework, student liking of the subject, student value of the subject, and student self-confidence in the subject.

[7] Mean centering continuous variables eliminates non-essential collinearity (i.e., correlation due to scales of the predictors) between each predictor and the interaction term, resulting in unbiased statistical estimation of all relationships and significance values (Cohen, Cohen, West, & Aiken, 2003).

dummy coded with males as the referent group (i.e., coded as '0'), home language was dummy coded with infrequent speaking of the language of the test at home as the referent group, and immigrant status was dummy coded with non-immigrant as the referent group.

Eighth grade data for Botswana, Ghana, and South Africa was downloaded from the IEA International Database (IDB) Analyzer (IEA, 2012). More specifically, the eighth grade student achievement data files[8], the eighth grade student background data files[9], the eighth grade student-teacher linkage files[10], the eighth grade mathematics teacher background data files[11], the eighth grade science teacher background data files,[12] and the eighth grade school background data files[13] for Botswana, Ghana, and South Africa were downloaded and merged using the IEA IDB merge module.

Data Analysis

All analyses were run using the IDB Analyzer analysis module in conjunction with IBM SPSS Statistics, Version 21. The IDB Analyzer generates SPSS syntax that takes into account information from the TIMSS 2011 sampling design in the computation of sampling variance, generates SPSS code to handle the use of plausible values, and accounts for clustering within the data (i.e., students nested within classrooms within schools) using jackknifed standard errors (IEA, 2013). Before running any models, for my preliminary analysis I created correlation matrices for each country for mathematics and science with all of the variables to begin seeing how the predictors of interest (feelings of belongingness and the categories of marginalization) were related to academic achievement.

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[8] The names of these data files include BSABWAM5, BSAGHAM5, and BSAZAFM5.
[9] The names of these data files include BSGBWAM5, BSGGHAM5, and BSGZAFM5.
[10] The names of these data files include BSTBWAM5, BSTGHAM5, and BSTZAFM5.
[11] The names of these data files include BTMBWAM5, BTMGHAM5, and BTMZAFM5.
[12] The names of these data files include BTSBWAM5, BTSGHAM5, and BTSZAFM5.
[13] The names of these data files are BCGBWAM5, BCGGHAM5, and BCGZAFM5.

A series of iterative ordinary least squares (OLS) multiple regression models were then used to answer my research questions. All conceptual models are explained below and the corresponding list of statistical models run can be found in the Appendix. Note that in the subsequent equations Y is mathematics or science achievement, β_0 is the intercept, *age* is student age, *hmwork* is student time spent on mathematics or science homework per week, *like* is student likes mathematics or science, *value* is student values mathematics or science, *confident* is student confidence in mathematics or science, *tchfemale* is teacher gender, *tchage* is teacher age, *tchexp* is teacher experience, *tchedu* is teacher education level, *urbanicity* is school urbanicity, *belong* is student feelings of belongingness, *female* is student gender, *SES* is student socioeconomic status, *hlang* is student home language, *immig* is student immigrant status, and *e* is the error term.

All control variables were entered into the model first to remove all variance in academic achievement due to student age, student time spent on homework, student liking of the subject, student value of the subject, student confidence in the subject, teacher gender, teacher age, teacher experience, teacher education level, and school urbancity.

Model 1: $Y = \beta_0 + \beta_a age + \beta_h hmwork + \beta_l like + \beta_v value + \beta_c confident$

$$+ \beta_m tchfemale + \beta_g tchage + \beta_p tchexp + \beta_d tchedu + \beta_u urbanicity + e \qquad (1)$$

Next, to answer RQ1 and RQ2, the student feelings of belongingness and categories of marginalization variables were added to the model to determine the main effects of feelings of belongingness and marginalization on academic achievement.

Model 2: $Y = \beta_0 + \beta_a age + \beta_h hmwork + \beta_l like + \beta_v value + \beta_c confident$

$$+ \beta_m tchfemale + \beta_g tchage + \beta_p tchexp + \beta_d tchedu + \beta_u urbanicity$$

$$+ \beta_b belong + \beta_f female + \beta_s SES + \beta_h hlang + \beta_i immig + e \qquad (2)$$

Building upon these models, to answer RQ3, interaction terms between feelings of belongingness and each category of marginalization were added to the model to examine the buffering effect of feelings of belongingness on the relationship between marginalization and achievement.

Model 3: $Y = \beta_0 + \beta_a age + \beta_h hmwork + \beta_l like + \beta_v value + \beta_c confident$

$+ \beta_m tchfemale + \beta_g tchage + \beta_p tchexp + \beta_d tchedu + \beta_u urbanicity$

$+ \beta_f female + \beta_s SES + \beta_h hlang + \beta_i immig + \beta_b belong$

$+ \beta_{fb} female*belong + \beta_{sb} SES*belong + \beta_{hb} hlang*belong$

$+ \beta_{ib} immig*belong + e$ (3)

Lastly, for RQ4 this process was repeated for each of the three countries for mathematics and science achievement. The resulting models were compared across the countries to examine cross-national differences in the estimated relationships. For all analyses, the student sampling weight TOTWGT was applied and listwise deletions were made for missing data.

Results

Tables 2.7-2.12 present the correlation matrices of all dependent and independent variables for each sub-Saharan African country. Tables 2.13-2.15 are the complete OLS regression tables for all 3 models predicting mathematics and science achievement in each of the three countries. To allow for easier comparison across countries, Table 2.16 below summarizes OLS estimates for the predictors of interest in the main effect and interaction models (Models 2 and 3). Furthermore, Table 2.17 summarizes which hypotheses were supported in each country in each subject.

Table 2.7

Correlation Matrix with Botswana Mathematics Data

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. math plausible value 1	1.00															
2. age	-.435**	1.00														
3. homework	.065**	-.070**	1.00													
4. likes math	.340**	-.100**	.030**	1.00												
5. values math	.335**	.143**	.069**	.461**	1.00											
6. confident math	.287**	-.047**	-.039**	.543**	.278**	1.00										
7. teacher gender	-.010	.000	.011*	-.031**	-.007	-.030**	1.00									
8. teacher age	.027**	-.018**	-.047**	-.014**	-.019**	.002	-.151**	1.00								
9. teacher experience	.076**	-.040**	-.035**	-.002	-.002	-.001	-.104**	.807**	1.00							
10. teacher education	-.002	-.04	-.002	-.048**	-.020**	-.031**	.132**	-.084**	.064**	1.00						
11. urbanicity	.199**	-.115**	-.043**	-.018**	.028**	-.048**	.126**	.051**	.133**	.126**	1.00					
12. feelings of belongingness	.066**	-.016**	.031**	.157**	.197**	.090**	.015**	.009	.010	-.009	.009	1.00				
13. gender	.085**	-.168**	.086**	.017**	.082**	-.072**	.044**	-.017**	-.031**	.008	-.015**	.014**	1.00			
14. SES	.080**	-.104**	.005	-.005	.021**	.073**	-.041**	.039**	.040**	.042**	.115**	-.055**	-.042**	1.00		
15. home language	.086**	-.059**	.003	-.011*	.001	.067**	.005	.022**	.035**	.062**	.098**	-.017**	.009	.231**	1.00	
16. immigrant status	-.137**	.120**	-.015**	-.060**	-.108**	.020**	-.023**	.033**	.028**	-.012*	-.030**	-.033**	-.020**	.065**	.091**	1.00

*Correlation is significant at the .05 level. **Correlation is significant at the .01 level.

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Table 2.8
Correlation Matrix with Botswana Science Data

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. science plausible value 1	1.00															
2. age	-.429**	1.00														
3. homework	-.116**	.051**	1.00													
4. likes math	.448**	-.172**	.005	1.00												
5. values math	.380**	-.171**	.011	.539**	1.00											
6. confident math	.329**	-.113**	.000	.520**	.333**	1.00										
7. teacher gender	.061**	-.034*	-.036*	-.038**	.007	-.038**	1.00									
8. teacher age	.049**	-.017	-.019	-.002	.009	.003	-.170**	1.00								
9. teacher experience	.035*	-.021	-.019	-.007	.008	-.026	-.132**	.713**	1.00							
10. teacher education	.002	-.014	-.018	-.048**	-.034*	-.037**	.135**	-.128**	-.094**	1.00						
11. urbanicity	.194**	-.107**	-.087**	-.028	.008	.055**	.146**	.051**	-.011	.066**	1.00					
12. feelings of belongingness	.076**	-.015	.021	.132**	.164**	.072**	.004	.016	.003	-.005	.002	1.00				
13. gender	.060**	-.170**	-.009	.035*	.068**	-.077**	-.007	-.005	-.009	-.018	-.015	.019	1.00			
14. SES	.102**	-.101**	.004	.030*	.007	.139**	.008	.049**	.051**	.052**	.108**	-.059**	-.043**	1.00		
15. home language	.071**	-.051**	-.021	-.014	-.049**	.094**	.005	.023	.045**	.037**	.087**	-.021	.003	.232**	1.00	
16. immigrant status	-.158**	.113**	-.013	-.109**	-.130**	-.023	-.012	-.035*	-.021	.046**	-.026	-.040**	-.023	.071**	.094**	1.00

*Correlation is significant at the .05 level. **Correlation is significant at the .01 level.

Table 2.9
Correlation Matrix with Ghana Mathematics Data

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. math plausible value 1	1.00															
2. age	-.271**	1.00														
3. homework	.049**	.023*	1.00													
4. likes math	.365**	-.146**	-.048**	1.00												
5. values math	.238**	-.074**	-.012	.409**	1.00											
6. confident math	.308**	-.099**	-.102**	.525**	.341**	1.00										
7. teacher gender	.013	.005	-.003	.029*	.054**	-.023	1.00									
8. teacher age	.063**	-.070**	.004	.034**	.014	-.016	.033**	1.00								
9. teacher experience	.094**	-.068**	-.042**	.009	.005	-.019	.084**	.806**	1.00							
10. teacher education	.098**	-.090**	.018	.063**	.029*	.028*	.133**	.460**	.384**	1.00						
11. urbanicity	.304**	-.223**	.019	.098**	.045**	.033**	.142**	.209**	.262**	.231**	1.00					
12. feelings of belongingness	.059**	-.028*	.027**	.155**	.225**	.105**	-.021	-.019	-.019	.021	-.029*	1.00				
13. gender	-.130**	-.077**	.025*	-.083**	-.026*	-.129**	.014	.005	.021	.030**	.022	.002	1.00			
14. SES	.100**	-.174**	.063**	.004	-.020	.046**	.009	.120**	.177**	.084**	.248**	-.059**	.007	1.00		
15. home language	.011	.024*	.025*	.038**	.037**	.051**	.038**	.013	.045**	-.035**	-.005	.020	-.043**	.129**	1.00	
16. immigrant status	-.090**	.017	-.036**	-.056**	-.056**	-.030**	.010	.014	.047**	.020	.008	-.046**	.018	.075**	.037**	1.00

*Correlation is significant at the .05 level. **Correlation is significant at the .01 level.

Table 2.10

Correlation Matrix with Ghana Science Data

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. science plausible value 1	1.00															
2. age	-.282**	1.00														
3. homework	-.055	.003	1.00													
4. likes math	.432**	-.178**	-.061**	1.00												
5. values math	.258**	-.083**	-.031**	.425**	1.00											
6. confident math	.362**	-.128**	-.095**	.602**	.415**	1.00										
7. teacher gender	-.048**	.037**	.011*	-.023*	-.009	-.026*	1.00									
8. teacher age	.146**	-.130**	.023	.033**	-.030*	-.005	-.024*	1.00								
9. teacher experience	.076**	-.067**	-.035**	.046**	-.011	.004	.103**	.681**	1.00							
10. teacher education	.130**	-.094**	.000	.062**	.000	.002	.066**	.413**	.268**	1.00						
11. urbanicity	.327**	-.232**	-.022	.140**	.045**	.077**	.089**	.318**	.207**	.306**	1.00					
12. feelings of belongingness	.079**	-.029*	.028*	.109**	.198**	.121**	.003	-.037**	-.030*	-.035**	-.028*	1.00				
13. gender	-.141**	-.078**	-.004	-.058**	.006	-.095**	.005	.012	.017	.038**	.012	.001	1.00			
14. SES	.150**	-.75**	.025*	.023*	-.011	.066**	.056**	.142**	.148**	.081**	.250**	-.059**	.008	1.00		
15. home language	.008	.027*	.018	.033**	.042**	.057**	-.010	.000	-.001	-.036**	-.013**	.019	-.041**	.128**	1.00	
16. immigrant status	-.106**	.015	-.013	-.074**	-.041**	-.026*	.001	-.001	.000	-.033*	.008	-.046**	.018	.074**	.037**	1.00

*Correlation is significant at the .05 level. **Correlation is significant at the .01 level.

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Table 2.11

Correlation Matrix with South Africa Mathematics Data

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. math plausible value 1	1.00															
2. age	-.356**	1.00														
3. homework	.055**	-.030**	1.00													
4. likes math	.117**	-.088**	.052**	1.00												
5. values math	.104**	-.080**	.069**	.484**	1.00											
6. confident math	.244**	-.073**	.061**	.560**	.349**	1.00										
7. teacher gender	.173**	-.080**	.021*	-.006	-.004	.024*	1.00									
8. teacher age	.000	.001	-.003	-.007	-.080**	-.025*	.122**	1.00								
9. teacher experience	-.033**	-.002	.009	.019*	.030**	-.019	.124**	.786**	1.00							
10. teacher education	.073**	.020*	.006	-.009	.011	.015	-.015	-.019	.067**	1.00						
11. urbanicity	.377**	-.146**	.011	-.053**	-.001	-.020*	-.055**	.072**	.028**	.129**	1.00					
12. feelings of belongingness	.009	-.017	.046**	.209**	.240**	.150**	.012	.013	.028**	.011	-.030**	1.00				
13. gender	-.009	-.213**	.039**	-.022*	.001	-.066**	.025**	-.122**	.018	-.011	.008	.023**	1.00			
14. SES	.390**	-.162**	.067**	-.030**	.010	.091**	.111**	.021*	.007	.037**	.231**	-.040**	-.022*	1.00		
15. home language	.371**	-.160**	.015	-.093**	-.029**	.021*	.096**	.067**	.041**	.032**	.204**	-.047**	.011	.281**	1.00	
16. immigrant status	-.339**	.207**	-.067**	-.107**	-.124**	-.021*	-.038**	-.029**	-.014	-.012	-.125**	-.049**	-.049**	-.067**	-.084**	1.00

*Correlation is significant at the .05 level. **Correlation is significant at the .01 level.

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Table 2.12

Correlation Matrix with South Africa Science Data

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. science plausible value 1	1.00															
2. age	-.362**	1.00														
3. homework	.070**	.054**	1.00													
4. likes math	.192**	-.111**	.065**	1.00												
5. values math	-.023*	.002	.121**	.523**	1.00											
6. confident math	.197**	-.108**	.033**	.635**	.426**	1.00										
7. teacher gender	.065**	-.008	.021*	-.040**	-.028**	-.023**	1.00									
8. teacher age	-.024*	.012	-.003	.006	.022*	.013	-.026**	1.00								
9. teacher experience	.049**	-.047**	-.001	.021*	.025*	.031**	-.071**	.791**	1.00							
10. teacher education	.125**	.016	.020*	-.047**	-.023*	-.026**	.103**	-.058**	-.067**	1.00						
11. urbanicity	.383**	-.146**	-.050**	-.019	-.085**	-.009	.115**	-.031**	.015	.047**	1.00					
12. feelings of belongingness	.004	-.017	.042**	.173**	.197**	.143**	-.009	.004	.000	-.012	-.030**	1.00				
13. gender	.006	-.213**	-.007	-.001	-.036**	-.016	.014	-.016	-.014	-.014	.008	.023*	1.00			
14. SES	.391**	-.162**	.001	.031**	-.021*	.082**	.058**	-.032**	.011	.105**	.231**	-.040**	-.022*	1.00		
15. home language	.430**	-.160**	-.052**	-.031**	-.110**	.062**	.075**	.011	.098**	.114**	.204**	-.047**	.011	.281**	1.00	
16. immigrant status	-.363**	.207**	.005	-.151**	-.037**	-.097**	-.034**	-.004	-.030**	-.008	-.125**	-.049**	-.049**	-.067**	-.034**	1.00

*Correlation is significant at the .05 level. **Correlation is significant at the .01 level.

Table 2.13

OLS Estimates for Models Predicting Mathematics and Science Achievement in Botswana

Predictors	Mathematics Models			Science Models		
	1	2	3	1	2	3
intercept	400.78 (2.63)	400.03 (3.14)	400.42 (3.13)	402.72 (3.53)	411.18 (3.34)	411.27 (3.29)
age	-30.02*** (1.61)	-28.19*** (1.70)	-28.12*** (1.70)	-35.99*** (2.04)	-34.79*** (1.92)	-34.76*** (1.91)
homework	5.87** (1.86)	5.72** (1.88)	5.79** (1.87)	-13.06** (2.27)	-13.07*** (2.34)	-12.98*** (2.34)
likes math	5.91*** (.93)	6.05*** (.90)	6.08*** (.90)	14.92*** (1.10)	14.53*** (1.11)	14.53*** (1.11)
values math	5.61*** (.79)	5.05*** (.75)	5.01*** (.75)	8.18*** (1.26)	8.14*** (1.26)	8.13*** (1.25)
confident math	6.89*** (.78)	7.02*** (.72)	7.04*** (.72)	7.01*** (.94)	6.25*** (.93)	6.29*** (.92)
teacher gender	-1.43 (4.39)	1.66 (4.73)	1.67 (4.73)	10.74* (5.26)	1.69 (5.64)	1.62 (5.61)
teacher age	.69 (5.00)	.41 (4.58)	.32 (4.56)	4.46 (4.79)	3.13 (3.98)	2.94 (3.95)
teacher experience	.37 (.67)	.41 (.64)	.42 (.64)	.26 (.54)	.24 (.53)	.24 (.52)
teacher education	11.24 (9.83)	11.72 (9.03)	11.63 (8.99)	4.08 (4.79)	3.28 (4.79)	3.21 (4.79)
urbanicity	11.26*** (2.00)	10.83*** (1.92)	10.79*** (1.90)	12.81*** (2.30)	12.41*** (2.10)	12.42*** (2.09)
FB		-.71 (1.41)	-.09 (1.52)		-.20 (1.38)	.04 (1.89)
gender		2.90 (3.21)	2.93 (3.17)		-11.24* (4.52)	-11.22* (4.51)
SES		.14 (.70)	.13 (.70)		.66 (1.01)	.64 (1.01)
home language		25.38* (10.53)	25.44* (10.55)		7.49 (12.07)	7.81 (12.17)
immigrant status		-32.58** (10.82)	-28.36* (11.91)		-34.10* (14.55)	-34.03* (14.77)
gender*tchgender		-4.38 (4.87)	-4.24 (4.88)		14.49** (4.86)	14.47** (4.84)
home language*tchgender		-40.41** (15.12)	-40.40** (15.18)		-1.99 (20.84)	-2.03 (20.66)
immigrant status*tchgender		25.79 (19.93)	19.09 (21.38)		18.69 (24.05)	17.43 (24.39)
gender*home language		-3.24 (10.96)	-3.22 (10.94)		13.27 (14.87)	13.13 (14.94)
gender*immigrant status		-1.64 (13.81)	-5.90 (14.98)		-25.06 (17.03)	-25.48 (16.98)
home language*immigrant status		-29.98 (20.10)	-36.65 (20.57)		-9.36 (34.47)	-7.89 (33.92)
gender*FB			-2.12 (2.07)			-.46 (3.21)
SES*FB			.06 (.69)			.66 (.73)
home language*FB			-1.05 (3.71)			-4.27 (4.46)
immigrant status*FB			9.92 (5.78)			8.94 (8.00)
gender*hlang*immig		70.17* (35.30)	82.10* (35.29)		94.23 (55.29)	97.38 (53.27)
gender*hlang*tchgender		39.10* (15.30)	38.87* (15.33)		6.74 (25.37)	6.51 (25.26)
gender*immig*tchgender		-22.05 (30.63)	-13.42 (31.19)		15.33 (37.08)	19.79 (37.28)
hlang*immig*tchgender		54.67 (50.80)	66.96 (46.08)		28.09 (55.21)	25.70 (55.17)
gender*hlang*immig*tchgender		-67.66 (71.33)	-88.64 (63.12)		-64.31 (84.19)	-70.05 (82.55)
Adjusted R^2	.33	.35	.35	.37	.38	.38
ΔR^2		.02	.00		.01	.00

Note. OLS = Ordinary Least Squares; tchgender = teacher gender; FB = feelings of belongingness; SES = socioeconomic status; hlang = home language; immig = immigrant status; standard errors of regression coefficients are in parentheses. *$p < .05$, **$p < .01$, ***$p < .001$

Table 2.14

OLS Estimates for Models Predicting Mathematics and Science Achievement in Ghana

Predictors	Mathematics Models			Science Models		
	1	2	3	1	2	3
intercept	343.40 (3.89)	355.75 (3.96)	355.92 (4.00)	322.32 (4.69)	338.69 (5.70)	338.70 (5.71)
age	-10.06*** (1.45)	-10.43*** (1.30)	-10.43*** (1.31)	-11.61*** (2.00)	-12.16*** (1.85)	-12.16*** (1.84)
homework	7.83** (2.47)	8.88*** (2.51)	8.87*** (2.49)	8.90** (3.17)	8.49** (3.16)	8.52** (3.18)
likes math	10.76*** (1.21)	10.41*** (1.28)	10.46*** (1.27)	16.05*** (1.80)	15.66*** (1.88)	15.64*** (1.88)
values math	1.85 (.98)	1.84 (1.08)	1.81 (1.08)	4.66*** (1.37)	4.84** (1.56)	4.82** (1.56)
confident math	7.21*** (.99)	6.69*** (1.05)	6.66*** (1.05)	8.98*** (1.12)	7.92*** (1.31)	7.93*** (1.31)
teacher gender	-11.03 (7.44)	-6.68 (8.68)	-7.23 (8.76)	-15.72 (9.69)	-11.54 (10.30)	-11.40 (10.36)
teacher age	-2.93 (6.26)	-5.25 (6.03)	-5.28 (6.01)	-.92 (6.01)	-.24 (5.65)	-.28 (5.70)
teacher experience	.73 (.66)	1.07 (.63)	1.07 (.63)	-.01 (.84)	-.06 (.81)	-.06 (.82)
teacher education	.31 (4.25)	1.23 (4.25)	1.31 (4.26)	2.29 (4.49)	2.19 (4.48)	2.20 (4.51)
urbanicity	9.90*** (1.76)	9.72*** (1.81)	9.71*** (1.81)	13.18*** (2.12)	13.31*** (2.13)	13.33*** (2.13)
FB		-1.67 (2.76)	-1.51 (3.42)		-.62 (3.13)	-1.80 (3.98)
gender		-20.95*** (3.56)	-20.89*** (3.57)		-25.81*** (4.85)	-25.83*** (4.81)
SES		-.37 (1.37)	-.39 (1.37)		1.15 (1.63)	1.15 (1.64)
home language		3.58 (5.62)	3.53 (5.28)		4.71 (7.28)	4.90 (7.32)
immigrant status		-28.87* (11.69)	-29.19* (11.70)		-25.94** (10.07)	-25.41* (10.36)
gender*tchgender		-5.07 (7.82)	-5.61 (8.05)		-3.96 (12.73)	-4.10 (12.59)
home language*tchgender		-11.77 (13.51)	-11.14 (13.29)		5.67 (20.85)	5.24 (21.05)
immigrant status*tchgender		49.61 (34.86)	53.26 (36.59)		3.02 (37.16)	3.05 (37.20)
gender*home language		-4.15 (7.10)	-4.16 (7.08)		-8.21 (9.80)	-8.36 (9.76)
gender*immigrant status		7.22 (13.98)	7.72 (13.69)		-15.17 (15.27)	-15.05 (15.29)
home language*immigrant status		-10.75 (19.44)	-7.88 (19.12)		-17.08 (21.62)	-17.09 (20.80)
gender*FB			-.68 (3.58)			2.11 (3.82)
SES*FB			1.26 (1.32)			-.07 (1.78)
home language*FB			-.50 (3.85)			-1.13 (4.88)
immigrant status*FB			5.60 (6.07)			6.12 (6.63)
gender*hlang*immig		12.35 (25.06)	9.59 (24.22)		11.99 (30.66)	11.23 (30.26)
gender*hlang*tchgender		-1.16 (16.72)	-.28 (16.87)		-11.47 (37.20)	-11.34 (37.15)
gender*immig*tchgender		-67.24 (42.47)	-71.20 (43.19)		26.67 (40.60)	27.36 (41.74)
hlang*immig*tchgender		-48.97 (56.31)	-52.20 (57.33)		-25.94 (50.88)	-26.74 (50.30)
gender*hlang*immig*tchgender		71.30 (62.49)	72.91 (63.49)		-67.60 (84.92)	-66.72 (82.17)
Adjusted R^2	.24	.26	.27	.29	.31	.31
ΔR^2		.02	.01		.02	.00

Note. OLS = Ordinary Least Squares; tchgender = teacher gender; FB = feelings of belongingness; SES = socioeconomic status; hlang = home language; immig = immigrant status; standard errors of regression coefficients are in parentheses. *$p < .05$, **$p < .01$, ***$p < .001$

Table 2.15

OLS Estimates for Models Predicting Mathematics and Science Achievement in South Africa

Predictors	Mathematics Models			Science Models		
	1	2	3	1	2	3
intercept	350.54 (4.03)	351.44 (4.25)	351.41 (4.27)	342.21 (7.07)	346.50 (7.54)	346.55 (7.53)
age	-19.34*** (1.68)	-14.04*** (1.36)	-14.01*** (1.35)	-26.20*** (1.85)	-19.36*** (1.58)	-19.30*** (1.57)
homework	7.09*** (2.06)	3.88* (1.73)	3.94* (1.73)	-2.87 (3.22)	-2.35 (3.14)	-2.25 (3.11)
likes math	1.50 (1.08)	1.66 (.85)	1.65 (.85)	12.40*** (1.06)	11.18*** (.86)	11.23*** (.87)
values math	-.08 (.83)	-.81 (.80)	-.86 (.79)	-8.06*** (1.23)	-5.75*** (1.03)	-5.85*** (1.01)
confident math	10.90*** (1.13)	9.92*** (.88)	9.97*** (.88)	8.82*** (1.08)	4.68*** (1.07)	4.73*** (1.07)
teacher gender	33.02*** (6.36)	30.69*** (5.19)	30.68*** (5.22)	8.47 (8.92)	-3.21 (9.23)	-3.21 (9.22)
teacher age	4.58 (5.11)	4.87 (3.69)	4.80 (3.68)	-16.60** (6.22)	-9.14* (4.66)	-9.17* (4.64)
teacher experience	-.72 (.63)	-.88 (.47)	-.87 (.47)	1.84* (.77)	.91 (.54)	.90 (.54)
teacher education	7.11* (3.61)	4.85 (2.97)	4.85 (2.94)	9.88* (4.33)	6.64* (3.06)	6.65* (3.06)
urbanicity	17.18*** (2.49)	11.79*** (2.03)	11.75*** (2.04)	18.02*** (3.16)	11.95*** (2.29)	11.87*** (2.30)
FB		-.12 (1.28)	.03 (2.07)		1.02 (1.76)	-.50 (2.56)
gender		-1.73 (4.62)	-1.46 (4.62)		-13.58* (6.32)	-13.32* (6.29)
SES		7.27*** (1.02)	7.25*** (1.03)		10.04*** (1.17)	10.01*** (1.19)
home language		58.67*** (7.95)	58.69*** (7.97)		92.13*** (9.22)	92.15*** (9.24)
immigrant status		-37.85*** (6.06)	-37.59*** (6.27)		-61.53*** (11.35)	-61.61*** (11.59)
gender*tchgender		-8.66 (5.74)	-8.69 (5.79)		7.30 (8.94)	7.23 (8.93)
home language*tchgender		-6.67 (11.98)	-6.64 (11.96)		-15.10 (10.84)	-15.28 (10.87)
immigrant status*tchgender		-12.43 (8.32)	-11.94 (8.45)		6.48 (16.37)	7.69 (16.45)
gender*home language		-13.31 (7.73)	-13.56 (7.82)		-20.92* (9.44)	-21.11* (9.41)
gender*immigrant status		-9.44 (7.64)	-9.63 (7.67)		-8.52 (12.04)	-8.03 (12.13)
home language*immigrant status		-41.99*** (12.07)	-41.67*** (12.23)		-57.11** (19.80)	-57.54** (19.99)
gender*FB			-1.49 (2.14)			-.67 (2.92)
SES*FB			.27 (.68)			.48 (.91)
home language*FB			-1.07 (2.85)			.14 (3.71)
immigrant status*FB			4.06 (2.90)			8.47* (3.85)
gender*hlang*immig		20.64 (16.50)	20.50 (16.81)		25.60 (23.48)	26.55 (24.25)
gender*hlang*tchgender		7.53 (9.18)	7.60 (9.21)		18.06 (13.41)	18.10 (13.33)
gender*immig*tchgender		10.22 (12.32)	9.25 (12.49)		16.52 (18.26)	14.44 (18.10)
hlang*immig*tchgender		5.02 (21.19)	4.04 (21.35)		20.67 (27.18)	22.24 (27.19)
gender*hlang*immig*tchgender		-.85 (26.42)	.39 (26.64)		-13.98 (31.28)	-15.00 (32.03)
Adjusted R^2	.31	.46	.46	.29	.47	.47
ΔR^2		.15**	.00		.18**	.00

Note. OLS = Ordinary Least Squares; tchgender = teacher gender; FB = feelings of belongingness; SES = socioeconomic status; hlang = home language; immig = immigrant status; standard errors of regression coefficients are in parentheses. *$p < .05$, **$p < .01$, ***$p < .001$

Table 2.16

OLS Estimates for Predictors of Interest in Key Models Predicting Mathematics and Science Achievement in Each Country

	Botswana				Ghana				South Africa			
	Mathematics		Science		Mathematics		Science		Mathematics		Science	
Predictors	Model 2	Model 3	Model 2	Model 3	Model 2	Model 3	Model 2	Model 3	Model 2	Model 3	Model 2	Model 3
Intercept	400.03 (3.14)	400.42 (3.13)	411.18 (3.34)	411.37 (3.29)	355.73 (3.96)	355.92 (4.00)	338.69 (5.70)	338.70 (5.71)	351.44 (4.25)	351.41 (4.27)	346.50 (7.54)	346.55 (7.53)
Feelings of belongingness	-.71 (1.41)	-.09 (1.52)	-.20 (1.38)	.04 (1.89)	-1.67 (2.76)	-1.51 (3.42)	-.62 (3.13)	-1.80 (3.98)	-.12 (1.28)	.03 (2.07)	1.02 (1.76)	-.50 (2.56)
Gender	2.90 (3.21)	2.93 (3.17)	-11.24* (4.52)	-11.22* (4.51)	-20.95*** (3.56)	-20.89*** (3.57)	-25.81*** (4.85)	-25.83*** (4.81)	-1.73 (4.62)	-1.46 (4.62)	-13.58* (6.32)	-13.32* (6.29)
SES	.14 (.70)	.13 (.70)	.66 (1.01)	.64 (1.01)	-.37 (1.37)	-.39 (1.37)	1.15 (1.63)	1.15 (1.64)	7.27*** (1.02)	7.25*** (1.03)	10.04*** (1.17)	10.01*** (1.19)
Home language	25.38* (10.53)	25.44* (10.55)	7.49 (12.07)	7.81 (12.17)	3.58 (5.62)	3.53 (5.28)	4.71 (7.28)	4.90 (7.32)	58.67*** (7.95)	58.69*** (7.97)	92.13*** (9.22)	92.15*** (9.24)
Immigrant status	-32.58** (10.82)	-28.36* (11.91)	-34.10* (14.55)	-34.03* (14.77)	-28.87* (11.69)	-29.19* (11.70)	-25.94** (10.07)	-25.41* (10.36)	-37.85*** (6.06)	-37.59*** (6.27)	-61.53*** (11.35)	-61.61*** (11.59)
Feelings of belongingness* gender		-2.12 (2.07)		-.46 (3.21)		-.68 (3.58)		2.11 (3.82)		-1.49 (2.14)		-.67 (2.92)
Feelings of belongingness* SES		.06 (.69)		.66 (.73)		1.26 (1.32)		-.07 (1.78)		.27 (.68)		.48 (.91)
Feelings of belongingness* home language		-1.05 (3.71)		-4.27 (4.46)		-.50 (3.85)		-1.13 (4.88)		-1.07 (2.85)		.14 (3.71)
Feelings of belongingness* immigrant status		9.92 (5.78)		8.94 (8.00)		5.60 (6.07)		6.12 (6.63)		4.06 (2.90)		8.47* (3.85)
Adjusted R^2	.34	.35	.37	.37	.26	.27	.31	.31	.46	.46	.47	.47

Note. SES = socioeconomic status; standard errors of regression coefficients are in parentheses.

*p < .05, **p < .01, ***p <.001

Table 2.17

Hypotheses Supported by Country

Country	Subject	H1	H2a	H2b	H2c	H2d	H3a	H3b	H3c	H3d
Botswana	Math				X	X				
	Science		X			X				
Ghana	Math		X			X				
	Science		X			X				
South Africa	Math			X	X	X				
	Science		X	X	X	X				X

Note. An X indicates that the designated hypothesis was supported for the respective country in the respective subject. Remember that main effects for feelings of belongingness (H1), gender (H2a), SES (H2b), home language (H2c), and immigrant status (H2d) on achievement were predicted. Interaction effects for feelings of belongingness and gender (H3a), SES (H3b), home language (H3c), and immigrant status (H3d) on achievement were also predicted.

In terms of overall model fit, when just the controls were entered first, Model 1 explained 33% of the variance (i.e., adjusted R^2) in mathematics achievement and 37% of the variance in science achievement in Botswana. In Ghana, the statistical controls accounted for 24% of the variance in mathematics and 29% of the variance in science achievement. In South Africa, the statistical controls accounted for 31% of the variance in mathematics and 29% of the variance in science achievement.

Next, when the main effects were added, Model 2 explained 35% of the variance in mathematics and 38% of the variance in science achievement in Botswana. In Ghana, the controls and main effects accounted for 26% of the variance in mathematics and 31% of the variance in science achievement. In South Africa, the controls and main effects accounted for 46% of the variance in mathematics and 47% of the variance in science achievement. The change in R^2 between Model 1 and Model 2 was not statistically significant in Botswana for mathematics ($\Delta R^2 = 0.02$, $p > .05$) or science ($\Delta R^2 = 0.01$, $p > .05$) or in Ghana for mathematics

($\Delta R^2 = 0.02$, $p > .05$) or science ($\Delta R^2 = 0.02$, $p > .05$), however it was statistically significant in South Africa for mathematics ($\Delta R^2 = 0.15$, $p < .01$) and science ($\Delta R^2 = 0.18$, $p < .01$).

Finally, when the interaction terms were added, Model 3 explained 35% of the variance in mathematics and 38% of the variance in science achievement in Botswana. In Ghana, the controls, main effects, and interactions together accounted for 27% of the variance in mathematics and 31% of the variance in science achievement. In South Africa, the controls, main effects, and interactions together accounted for 46% of the variance in mathematics and 47% of the variance in science achievement. The change in R^2 between Model 2 and Model 3 was not statistically significant in Botswana for mathematics ($\Delta R^2 = 0.00$, $p > .05$) or science ($\Delta R^2 = 0.00$, $p > .05$), in Ghana for mathematics ($\Delta R^2 = 0.01$, $p > .05$) or science ($\Delta R^2 = 0.00$, $p > .05$), or in South Africa for mathematics ($\Delta R^2 = 0.00$, $p > .05$) or science ($\Delta R^2 = 0.00$, $p > .05$). A detailed description of the individual models and relationships used to test each of my research questions is presented below.

RQ1: Feelings of Belongingness and Achievement

Bivariate analyses suggested that student feelings of belongingness were positively, albeit weakly, related to achievement in two of the three countries for both subjects. In Botswana, student feelings of belongingness was positively correlated with mathematics ($r = 0.07$, $p < .01$) and science achievement ($r = 0.08$, $p < .01$). Positive correlations between feelings of belongingness and achievement were also found in Ghana in both mathematics ($r = 0.06$, $p < .01$) and science ($r = 0.08$, $p < .01$). However, in South Africa the correlation between feelings of belongingness and achievement was not significant in mathematics ($r = 0.00$, $p > .05$) or science achievement ($r = 0.01$, $p > .05$). These findings suggest that higher feelings of

belongingness appear to be associated with higher achievement in mathematics and science in Botswana and Ghana, but not in South Africa.

Despite the presence of positive associations between feelings of belongingness and achievement in the bivariate analyses, student feelings of belongingness were not found to be significantly associated with mathematics and science achievement in the OLS regression models across all three countries. In the main effects model (Model 2), when student feelings of belongingness was added as a predictor with the controls and marginalization variables, no statistically significant main effect was found for feelings of belongingness on achievement in Botswana for mathematics ($b = -0.54$, $p > .05$) and science ($b = -0.19$, $p > .05$), in Ghana for mathematics ($b = -1.01$, $p > .05$) and science ($b = 0.26$, $p > .05$), and in South Africa in mathematics ($b = -0.62$, $p > .05$) and science ($b = 0.66$, $p > .05$). These results show that when holding constant the controls and marginalization, students' feelings of belongingness do not have a direct effect on mathematics and science achievement in Botswana, Ghana, and South Africa. Thus, H1 was not supported.

RQ2: Marginalization and Achievement

Results examining the association between marginalization and achievement will be discussed separately for each category of marginalization (gender, SES, home language, and immigrant status).

RQ2a: Gender and achievement. Bivariate analyses showed mixed results when examining the point-biserial correlations[14] between student gender and achievement across the three countries. In Botswana, being a girl was positively correlated with mathematics ($r = 0.09$, $p < .01$) and science achievement ($r = 0.06$, $p < .01$). In Ghana, being a girl was negatively

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[14] Point-biserial correlations are used to estimate a linear relationship between a continuous variable and a true dichotomous variable. They are statistically and inferentially identical to the Pearson product moment correlation used to estimate linear relationships between two continuous variables.

correlated with mathematics ($r = -0.13$, $p < .01$) and science achievement ($r = -0.14$, $p < .01$). In South Africa, student gender was not significantly correlated with mathematics ($r = -0.01$, $p > .05$) or science achievement ($r = 0.01$, $p > .05$). These findings suggest a positive association between being a girl and achievement in Botswana, a negative association in Ghana, and no association in South Africa.

Regression findings were also mixed regarding the main effect of student gender on mathematics achievement across the three countries, but were statistically significant for science achievement in all countries. In Botswana, when holding constant the controls, feelings of belongingness, and other categories of marginalization in Model 2, no statistically significant main effect was found for gender on mathematics achievement ($b = 2.90$, $p > .05$). However, there was a statistically significant main effect for gender on science achievement in Botswana ($b = -11.24$, $p < .05$). This means that on average Batswana girls score approximately 11 points lower in science compared to boys.

In Ghana, when holding constant the controls, feelings of belongingness, and other categories of marginalization in Model 2, a statistically significant main effect was found for gender on mathematics achievement ($b = -20.95$, $p < .001$) and science achievement ($b = -22.81$, $p < .001$). This means that on average Ghanaian girls score approximately 21 points lower in mathematics compared to boys and 23 points lower in science.

In South Africa, when holding constant the controls, feelings of belongingness, and other categories of marginalization in Model 2, no statistically significant main effect was found for gender on mathematics achievement ($b = -1.73$, $p > .05$). However, a statistically significant main effect was found for gender on science achievement in South Africa ($b = -13.58$, $p < .05$).

This means that on average South African girls score approximately 14 points lower in science compared to boys after accounting for other relevant differences in their background.

Overall, the OLS regression results show that being a girl was negatively associated with science achievement in all three countries and was negatively associated with mathematics achievement in Ghana. Therefore, H2a was supported in all three countries in science and in Ghana in mathematics, but was not supported in Botswana and South Africa in mathematics.

RQ2b: SES and achievement. Bivariate analyses suggested that student SES was positively related to achievement in all countries for both subjects. In Botswana SES was positively correlated with mathematics ($r = 0.08$, $p < .01$) and science achievement ($r = 0.10$, $p < .01$), as well as in Ghana in mathematics ($r = 0.10$, $p < .01$) and science ($r = 0.15$, $p < .01$), and in South Africa in mathematics ($r = 0.39$, $p < .01$) and science ($r = 0.39$, $p < .01$). These findings suggest that higher SES appears to be associated with higher achievement in mathematics and science in all three countries.

The positive association between SES and achievement only held in one of the three countries when examining the main effect of student SES on mathematics and science achievement in the OLS regression models. In Botswana, when holding constant the controls, feelings of belongingness, and other categories of marginalization in Model 2, no statistically significant main effect was found for SES on mathematics ($b = 0.14$, $p > .05$) or science achievement ($b = 0.66$, $p > .05$). The same non-significant results were found in Ghana for mathematics ($b = -0.37$, $p > .05$) and science achievement ($b = 1.15$, $p > .05$).

In contrast, in South Africa, when holding constant the controls, feelings of belongingness, and other categories of marginalization in Model 2, a statistically significant main effect was found for SES on mathematics ($b = 7.27$, $p < .001$) and science achievement ($b =$

10.04, $p < .001$). This means that on average a 1 unit increase in SES is associated with a 7 point increase in mathematics achievement and a 10 point increase in science achievement in South Africa.

Overall, South Africa was the only country where student SES was positively associated with mathematics and science achievement. Therefore, H2b was supported in South Africa in mathematics and science, but it was not supported in Botswana and Ghana in either subject.

RQ2c: Home language and achievement. Bivariate analyses suggested that frequently speaking the language of the test at home was positively related to achievement in two of the three countries for both subjects. In Botswana frequent speaking of the language of the test at home was positively correlated with mathematics ($r = 0.09$, $p < .01$) and science achievement ($r = 0.07$, $p < .01$). In Ghana student home language was not significantly correlated with mathematics ($r = 0.01$, $p > .05$) or science achievement ($r = 0.01$, $p > .05$). In South Africa frequent speaking of the language of the test at home was positively correlated with mathematics ($r = 0.37$, $p < .01$) and science achievement ($r = 0.43$, $p < .01$). These findings suggest that frequent speaking of the language of the test at home appears to be associated with higher achievement in mathematics and science in Botswana and South Africa, but not in Ghana.

The positive associations between student home language and achievement found in the bivariate analyses held fairly well when examining the main effect of student home language on mathematics and science achievement across the three countries. In Botswana, when holding constant the controls, feelings of belongingness, and other categories of marginalization in Model 2, a statistically significant main effect was found for home language on mathematics ($b = 25.38$, $p < .05$) but not science achievement ($b = 7.49$, $p > .05$). This means that Batswana students who frequently speak the language of the test at home score approximately 25 points

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higher in mathematics compared to students who do not frequently speak the language of the test at home.

In Ghana, when holding constant the controls, feelings of belongingness, and other categories of marginalization in Model 2, no statistically significant main effect was found for home language on mathematics ($b = 3.58$, $p > .05$) or science achievement ($b = 4.71$, $p > .05$).

In South Africa, when holding constant the controls, feelings of belongingness, and other categories of marginalization in Model 2 for South Africa, a statistically significant main effect was found for home language on mathematics ($b = 58.67$, $p < .001$) and science achievement ($b = 92.13$, $p < .001$). This means that on average South African students who frequently speak the language of the test at home score approximately 59 points higher in mathematics and 92 points higher in science compared to students who do not frequently speak the language of the test at home.

Overall, being a student who frequently speaks the language of the test at home was positively associated with mathematics achievement in Botswana and South Africa, as well as science achievement in South Africa. Therefore, H2c was supported in Botswana for mathematics and in South Africa for mathematics and science, but was not supported in Botswana for science or in Ghana for mathematics or science.

RQ2d: Immigrant status and achievement. Bivariate analyses suggested that being an immigrant was negatively related to achievement in all three countries for both subjects. In Botswana being an immigrant was negatively correlated with mathematics ($r = -0.14$, $p < .01$) and science achievement ($r = -0.16$, $p < .01$), as well as in Ghana in mathematics ($r = -0.09$, $p < .01$) and science ($r = -0.11$, $p < .01$), and in South Africa in mathematics ($r = -0.34$, $p < .01$) and

science ($r = $ -0.36, $p < .01$). These findings suggest that being an immigrant is associated with lower achievement in mathematics and science in all three countries.

The OLS regression results are consistent with the bivariate results, as student immigrant status was found to be significantly associated with mathematics and science achievement across all three countries when modeling main effects. In Botswana, when holding constant the controls, feelings of belongingness, and other categories of marginalization in Model 2, a statistically significant main effect was found for immigrant status on mathematics ($b = $ -32.58, $p < .01$) and science achievement ($b = $ -34.10, $p < .05$). This means that on average Batswana immigrant students score approximately 33 points lower in mathematics compared to non-immigrants and 34 points lower in science. The same pattern of results was found in Ghana in mathematics ($b = $ -28.07, $p < .05$) and science ($b = $ -25.94, $p < .01$), as well as in South Africa in mathematics ($b = $ -37.85, $p < .001$) and science ($b = $ -61.53, $p < .001$). This means that on average Ghanaian immigrant students score approximately 28 points lower in mathematics and 26 points lower in science compared to non-immigrants, while South African immigrant students score 38 points lower in mathematics and 62 points lower in science. Overall, these findings demonstrate that being an immigrant is associated with lower mathematics and science achievement in Botswana, Ghana, and South Africa. Therefore, H2d was supported in all countries in both subjects.

RQ3: Feelings of Belongingness as a Buffer

In the vast majority of the interaction models, student feelings of belongingness was not found to significantly buffer the negative relationship between marginalization and academic achievement. Details and the one exception to this pattern of results are explained below

separately for the buffering effect of feelings of belongingness on the relationship between each category of marginalization and achievement.

RQ3a: Feelings of belongingness and gender. Student feelings of belongingness did not significantly buffer the relationship between student gender and achievement for any country in either subject. In Botswana, when holding the controls, marginalization, and other interactions constant in Model 3, no statistically significant interaction was found for feelings of belongingness and gender on mathematics ($b = -2.12$, $p > .05$) or science achievement ($b = -0.46$, $p > .05$). The same pattern of non-significant results was found in Ghana for the interaction between feelings of belongingness and gender on mathematics ($b = -0.68$, $p > .05$) and science achievement ($b = 2.11$, $p > .05$), as well as in South Africa in mathematics ($b = -1.49$, $p > .05$) and science ($b = -0.67$, $p > .05$). Thus, H3a was not supported in any country in either subject.

RQ3b: Feelings of belongingness and SES. Student feelings of belongingness did not significantly buffer the relationship between student SES and achievement for any country in either subject. In Botswana, when holding the controls, marginalization, and other interactions constant in Model 3, no statistically significant interaction was found for feelings of belongingness and SES on mathematics ($b = 0.06$, $p > .05$) or science achievement ($b = 0.66$, $p > .05$). The same pattern of non-significant results was found in Ghana for the interaction between feelings of belongingness and SES on mathematics ($b = 1.26$, $p > .05$) and science achievement ($b = -0.07$, $p > .05$), as well as in South Africa in mathematics ($b = 0.27$, $p > .05$) and science ($b = 0.48$, $p > .05$). Thus, H3b was not supported in any country in either subject.

RQ3c: Feelings of belongingness and home language. Student feelings of belongingness did not significantly buffer the relationship between student home language and achievement for any country in either subject. In Botswana, when holding the controls,

marginalization, and other interactions constant in Model 3, no statistically significant interaction was found for feelings of belongingness and home language on mathematics (b = -1.05, p > .05) or science achievement (b = -4.27, p > .05). The same pattern of non-significant results was found in Ghana for the interaction between feelings of belongingness and home language on mathematics (b = -0.50, p > .05) and science achievement (b = -1.13, p > .05), as well as in South Africa in mathematics (b = -1.07, p > .05) and science (b = 0.14, p > .05). Thus, H3c was not supported in any country in either subject.

RQ3d: Feelings of belongingness and immigrant status. Student feelings of belongingness significantly buffered the relationship between student immigrant status and achievement in one of the three countries in one subject. In Botswana, when holding the controls, marginalization, and other interactions constant in Model 3, no statistically significant interaction was found for feelings of belongingness and immigrant status on mathematics (b = 9.92, p > .05) or science achievement (b = 8.94, p > .05). The same pattern of non-significant results was found in Ghana for the interaction between feelings of belongingness and immigrant status on mathematics (b = 5.60, p > .05) and science achievement (b = 6.12, p > .05), as well as in South Africa in mathematics (b = 4.06, p > .05).

There was, however, one exception to this pattern of non-significant results. In South Africa, when holding the controls, marginalization, and other interactions constant in Model 3, a statistically significant interaction was found between feelings of belongingness and immigrant status on science achievement (b = 8.47, p < .05). As depicted in Figure 2.2, the interaction between feelings of belongingness and immigrant status is an ordinal interaction, whereby the regression lines do not cross within the observed range of data (Cohen, Cohen, West, & Aiken, 2003). This means that although higher feelings of belongingness significantly increase science

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achievement for immigrant students, their achievement never surpasses that of their non-immigrant peers. Overall, H3d was supported in South Africa in science only. H3d was not supported in Botswana and Ghana in either subject or in South Africa in mathematics.
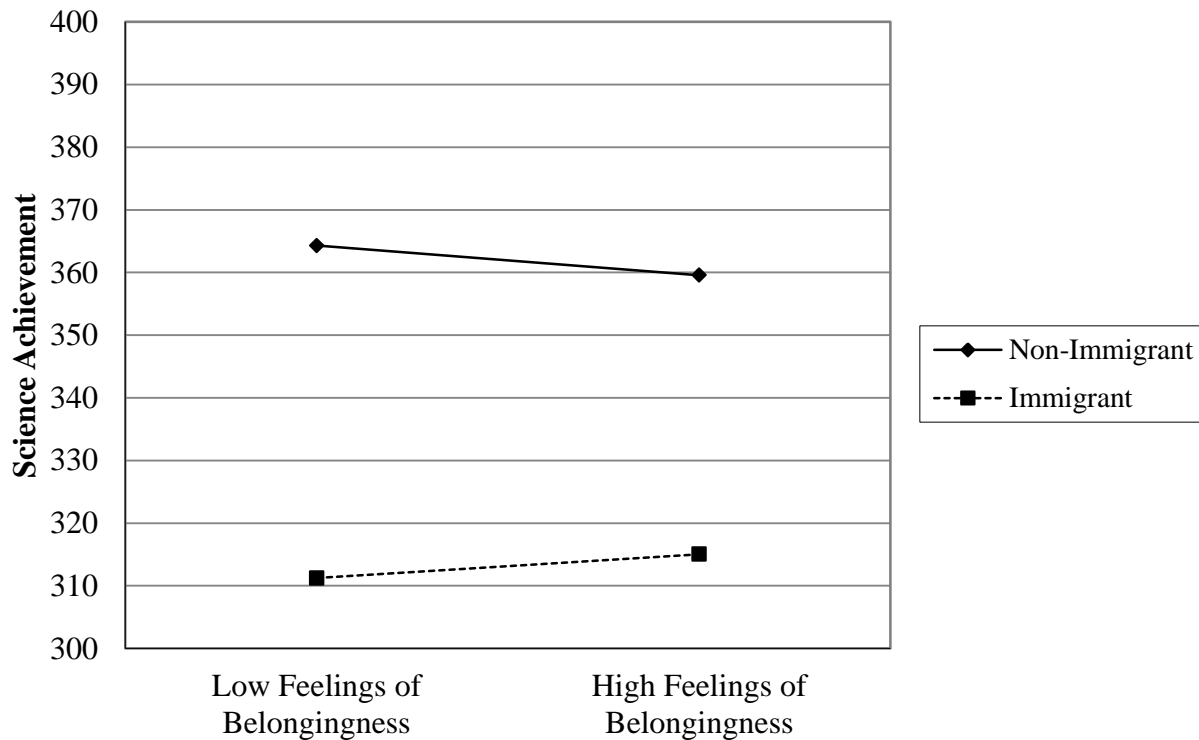
Figure 2.2. Ordinal interaction between feelings of belongingness and immigrant status in South Africa.

RQ4: Cross-National Comparisons

Comparisons in the relationships analyzed between feelings of belongingness, marginalization, and academic achievement between Botswana, Ghana, and South Africa were made throughout the RQ1-3 subsections above and are summarized in Table 2.16. Notable similarities and differences in the results across the three sub-Saharan African countries will be highlighted here.

Examining the results across the countries, the findings for RQ1 and RQ3 had the greatest overlap. One striking similarity is that H1 was not supported in any country in either

subject. Student feelings of belongingness were found to have no significant main effect on mathematics or science achievement across Botswana, Ghana, and South Africa. Another similarity is that H3a, H3b, and H3c were not supported in any country in either subject. The interactions between student feelings of belongingness and gender, SES, and home language on mathematics and science achievement were not significant across Botswana, Ghana, and South Africa.

Similarities across countries diverge considerably when comparing the results for RQ2. A notable difference between the three countries is that South Africa is the only country where the main effect of marginalization on science achievement was significant for all four categories of marginalization (gender, SES, home language, and immigrant status). In contrast, the main effect of marginalization on science achievement was only significant for two of the four categories of marginalization (gender and immigrant status) in Botswana and Ghana. More cross-national differences emerge when comparing the main effect of marginalization on mathematics achievement. Similar to the results for science, in South Africa the main effect of marginalization on mathematics achievement was significant for more categories of marginalization than Botswana and Ghana. In South Africa the main effects of three categories of marginalization (SES, home language, and immigrant status) on mathematics achievement were significant, whereas significant main effects were only found for two categories of marginalization in the other countries (SES and immigrant status in Botswana and gender and immigrant status in Ghana).

Finally, perhaps the most salient cross-country difference is that South Africa was the only country where a significant interaction between feelings of belongingness and marginalization was found. The results show that student feelings of belongingness significantly

buffer the relationship between immigrant status and science achievement in South Africa, but all other interaction terms between feelings of belongingness and marginalization were non-significant.

Discussion

The findings of this study as illustrated above provide some insight into the relationships between marginalization, feelings of belongingness, and academic achievement for eighth grade students in sub-Saharan Africa. This section connects my findings to previous literature, speculates why some hypotheses were not supported, posits limitations of the study, and makes recommendations for future research.

Marginalization

The findings of this study produced mixed results regarding the relationships between categories of marginalization and academic achievement. Some categories of marginalization operated as expected in relation to mathematics and science achievement, such as immigrant status, but others operated in ways that were not predicted, such as SES. The relationship between each category of marginalization and mathematics and science achievement will be discussed in more detail below.

Gender. The presence of a main effect of gender on academic achievement in Ghana for both subjects is consistent with previous research demonstrating that girls are most academically at risk in Ghana compared to Botswana and South Africa (Etse-Quest et al., 2010; UNESCO, 2012). The presence of a main effect of gender on science achievement in Botswana and South Africa is also consistent with previous research that demonstrates an achievement gender gap in these two sub-Saharan African countries as well (Etse-Quest et al., 2010; Hungi, 2011), however the absence of a significant main effect of gender on mathematics achievement for these

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countries was surprising. The direction of the effect of gender on achievement was as expected in Ghana and South Africa, yet in Botswana there has been mixed results with some studies showing girls outperforming boys (e.g., Etse-Quest et al., 2010) and others with boys outperforming girls (e.g., Hungi, 2011). The present study supports the former, finding that female students scored significantly lower than males in all three countries in science.

Further research should continue to investigate the relationship between gender and mathematics achievement in the three countries studied here. Examining why no main effect of gender was found in Botswana and South Africa in mathematics would be especially valuable. If the gender gap in these countries is indeed closing and being a girl is no longer a disadvantage in mathematics, than this study shows promising evidence for the education systems of Botswana and South Africa. Further research investigating why the gender gap in these contexts is closing could aid other countries in achieving greater gender equality in secondary schools.

SES. It is surprising that South Africa was the only country where a main effect of SES on achievement was found given the well-established relationship between SES and academic outcomes in low-income countries (Chiu, 2007; Chudgar & Luschei, 2009; Heyneman, 1976a, 1976b, 1979; Heyneman & Loxley, 1983; Nonoyama-Tarumi & Willms, 2010; Schiller, Khmelkov, & Wang, 2002). Although all three countries are considered to be developing nations characterized by low GDPs (IMF, 2013), South Africa has the greatest within-country inequality in the distribution of family income, as it has the second highest GINI index in the world (CIA, 2013). South Africa also has one of the largest score distributions from the 5th to 95th percentile for mathematics and science of all participating TIMSS 2011 countries (Mullis et al., 2012; Martin et al., 2012), signaling large disparities in performance across students. Together, this wide variation in SES and in achievement may explain why the main effect of

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SES on achievement was only statistically significant for South Africa due to the large amount of variance in both variables. Although Botswana has the third highest GINI index in the world, Ghana is ranked much lower as sixty-third (CIA, 2013). Additionally, neither Botswana nor Ghana had as much within-country inequality in TIMSS scores as South Africa (Mullis et al., 2012; Martin et al., 2012). This means that compared to South Africa, Botswana and Ghana have less variance in these variables to be able to find a significant effect.

The lack of a main effect of SES on achievement in Botswana and Ghana could also be due to measurement issues. The issue of measuring SES is complex because there is a lack of consensus or best practices on how to account for SES in cross-national educational research, and this variability in approaches leads to variability in results and interpretation (Chudgar, Luscheli, & Fagioli, 2014). Furthermore, measuring SES in developing countries poses additional challenges because many indicators are unreliable and insensitive in the context of developing world economies (Doocy & Burnham, 2006). In this study, the HER scale was used as a proxy for SES and was based on the number of books in the home, parent education, and home study supports. Additional components of SES that were not included in the proxy used in this study might include family income, parent occupation, and additional home possessions (e.g., computer, Internet, refrigerator, television, radio, bicycle, livestock, and land). Further research should determine if other measures of SES are related differently to achievement in the TIMSS 2011 data for Botswana and Ghana, similar to the approach taken by Chudgar et al. (2014) in their cross-national comparison of the relative importance of variables commonly used to measure SES models using TIMSS 2007 eighth grade data.

On the other hand, if the finding here of no main effect of SES on achievement is not a variance or measurement issue this could mean that SES is indeed unrelated to mathematics and

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science achievement in Botswana and Ghana. Similar to the lack of gender effects discussed above, this could be evidence of progress towards more equitable academic achievement in these countries. Further research into the relationship between SES and achievement in Botswana and Ghana would be helpful to confirm or refute this finding.

Home language. The main effect of home language on mathematics in Botswana and on mathematics and science in South Africa is consistent with previous research demonstrating higher academic performance when a student's home language is consistent with the language of instruction and testing (Herbert et al., 2002; Martin et al., 2008; Papanastasiou, 2000). It is surprising that this main effect was not found in Ghana as well, given that Opoku-Amankwa (2009) found detrimental effects of English-only instruction on learning in Ghana. However, of the three countries, the vast majority of previous research on home language and achievement has been conducted in South Africa (Howie, 2001; McKay & Chick, 2001; PANSALB, 2000; Posel & Zeller, 2011; Probyn, 2006; Probyn et al., 2002), so perhaps more work is needed in the Ghanian context to better understand the nuanced relationship between home language and academic achievement. Additionally, students who speak a language other than the language of instruction and testing are more likely to fail and drop out of school (Brock-Utne, 2001), so perhaps the effect that Opoku-Amankwa (2009) found at the primary level was not found here at the secondary level because students who were struggling in school due to language challenges had already dropped out and were not represented in the eighth grade sample. Additional research would be helpful to inform our understanding of the relationship between home language and achievement in secondary education, most notably in Ghana.

Immigrant status. The main effect of immigrant status on both mathematics and science achievement found in all three countries is consistent with previous research demonstrating an

achievement gap between immigrant and non-immigrant students (Brown, 2006; OECD, 2007; Schnepf, 2004). Furthermore, this finding suggests that the documented presence of xenophobic attitudes in Botswana, Ghana, and South Africa (Campbell, 2003; Nyamjoh, 2006; Kerting, 2009; van Dijk, 2002; Whitacker, 2005) can create an educational disadvantage for immigrant students. This is an important issue for future research and educational policy to address to ensure that all students can succeed in school, regardless of their immigrant status.

Feelings of Belongingness

Despite the theoretical framework and conceptual model developed above suggesting that feelings of belongingness have a direct and buffering effect on academic achievement, H1 and H3 were largely not supported by my analysis. The absence of a main effect of feelings of belongingness on mathematics and science achievement means that student feelings of belongingness do not seem to play an important role relative to the other independent variables in the model (the controls and marginalization variables). This finding is inconsistent with previous literature that found a direct effect of feelings of belongingness on academic achievement (Anderman, 2003; Kennedy & Tuckman, 2013). Furthermore, the absence of significant interaction terms between feelings of belongingness and marginalization on achievement suggests that student feelings of belongingness do not appear to buffer the negative relationships between gender, SES, and home language in any of the countries analyzed here.

Limitations associated with the measurement of student feelings of belongingness in this study may help explain the absence of significant main and interaction effects. Although TIMSS 2011 data was desirable for my study because it afforded me the opportunity to analyze and compare multiple relationships incorporating multiple student-level, teacher-level, and school-level variables across multiple sub-Saharan African countries, its measurement of feelings of

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belongingness is limited. Due to the realities of what was available in the TIMSS 2011 data, the student feelings of belongingness variable was based on student responses to one item asking the extent to which they feel like they belong at their school. While this one item is the closest variable that the TIMSS 2011 data has to the psychological construct of feelings of belongingness, a scale designed to capture the nuanced construct of feelings of belongingness would have been more ideal. It is more customary in psychological literature on student feelings of belongingness to use a scale to measure this construct, such as the 18-item Psychological Sense of School Membership Scale (Goodenow, 1993). Future research examining the relationships between feelings of belongingness, marginalization and achievement might consider using a more detailed measure of feelings of belongingness than the one used here.

Cross-cultural generalizability is a related issue to the limitations of my measure of feelings of belongingness. The psychological theory that informs my conceptualization of the construct of feelings of belongingness comes from Western scholars, and in this study I am applying it to the global South by examining sub-Saharan African countries. The application of Western psychological theories to African contexts can be problematic and in some cases is inappropriate (e.g., Cole & Bruner, 1971; Cole & Scribner, 1977). Future research may wish to explore the conceptualization and measurement of the construct of belongingness from the perspective of Batswana, Ghanaian, and South African students to understand how student feelings of belongingness may or may not relate to academic achievement for marginalized students in those particular contexts.

An additional factor to consider in light of the non-significant results is the way that the direct and indirect influence of feelings of belongingness was modeled in this study. Due to the lack of consensus in existing literature on whether feelings of belongingness are directly or

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indirectly related to student achievement, this study aimed to provide some clarity by modeling both a direct effect and an indirect effect through an interaction with marginalization. The lack of significant findings here may not mean that there is no relationship at all between feelings of belongingness, marginalization, and academic achievement. Instead, the significant positive bivariate correlations between feelings of belongingness and mathematics and science achievement would suggest that there is a relationship, but the nuanced relationships between these variables may be incorrectly specified by the models. Previous research has pointed to the roles that student engagement and motivation might play as moderators of the relationship between feelings of belongingness and achievement (Anderson & Freeman, 2004; Osterman, 2000). As such, future research should consider how student engagement and motivation impact the relationship between feelings of belongingness, marginalization, and achievement. Extending the present study by incorporating students engagement and/or motivation could further our understanding of the psychological process of how feelings of belongingness may indirectly impact the academic achievement of marginalized students.

The one exception to the pattern of non-significant findings concerning student feelings of belongingness was H3d regarding the buffering effect of feelings of belongingness on the relationship between immigrant status and academic achievement, which was supported in South Africa for science achievement. This finding suggests that even though immigrant students in South Africa are at risk of lower science achievement, positive feelings of belongingness help buffer the negative effect of immigrant status on achievement. One possible implication of this finding is that enhancing immigrant students' feelings of belongingness may have the potential to improve their academic outcomes. However, because the relationship was an ordinal interaction, it appears that feelings of belongingness can never completely make up for the

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educational disadvantage that immigrant students have. For this reason, further research and educational policy initiatives should work to identify additional ways to improve the academic achievement of marginalized students in sub-Saharan African countries.

Additional Limitations and Future Directions

In addition to the limitations and future directions already discussed, there are some broader ways to extend this study. First, while the present study was an attempt to analyze all cross-country markers of marginalization provided by the TIMSS 2011 data, the categories of marginalization that were included was by no means exhaustive. This is a common challenge of research on marginalization in education because national data are rarely detailed enough to identify all the different types of marginalized groups (UNESCO, 2010). Due to the measurement limitations of the TIMSS data, additional categories of marginalization such as disability status, race, ethnicity, religious affiliation, and sexual orientation were not able to be included in this analysis. Future research using other data sources should explore how student feelings of belongingness might impact the academic experiences and corresponding achievement of students from these and other marginalized groups to examine if there are any similarities and differences across marginalized groups.

A related extension of this study is to explore the nuanced and overlapping nature of marginalization in relation to feelings of belongingness and academic achievement. Similar to the previous discussion about the potential cross-cultural differences in the understanding and measurement of student feelings of belongingness, the definition of particular categories of marginalization may not necessarily be consistent across different contexts and this is a limitation of using large cross-national datasets. Instead of taking presupposed categories of marginalization as was done here, an alternative approach to studying the relationships between

feelings of belongingness, marginalization, and academic achievement would be to see what categories of marginalization emerge within given educational contexts through classroom observation research for example. In addition to examining the cultural relevance of categories of marginalization in school, future research could also explore the overlapping nature of marginalization in relation to feelings of belongingness by examining for instance the educational experiences of female immigrant students. Having multiple markers of marginalization can create greater educational disadvantage and social isolation by making students experience what Purdie-Vaughns and Eibach (2008) term as "intersectional invisibility" (i.e., possessing multiple markers of marginalization renders a person invisible relative to those belonging to a single category of marginalization). Perhaps the buffering effect of feelings of belongingness on the relationship between marginalization and academic achievement is stronger for students experiencing intersectional invisibility.

A final recommended extension of this study is geographically to include other countries beyond the three examined here and other world regions beyond sub-Saharan Africa. Given the concentration of previous research on student feelings of belongingness and academic achievement in the U.S., cross-national and regional comparisons would be interesting to see if student feelings of belongingness operate differently in the global North versus South. Or perhaps different results would be found in contexts outside of sub-Saharan Africa where marginalization is less widespread.

Conclusion

Overall, this study challenges us to consider how student feelings of belongingness and marginalization operate independently and together to impact academic achievement in sub-Saharan Africa. This study is among the first to empirically test the buffering effect of feelings

of belongingness on the relationship between marginalization and academic achievement. While student feelings of belongingness were only found to buffer the relationship between one of the four categories of marginalization and achievement in one of the two subjects in one of the three countries (immigrant status and mathematics in South Africa), this study can serve as a launch point for future work continuing to explore the nuanced relationship between student feelings of belongingness, marginalization, and academic achievement in ways that address the study's limitations. Future research in developing and developed contexts can inform the potential of feelings of belongingness to advance the academic achievement of marginalized students.

APPENDIX

Statistical Equations

The following statistical equations specify the iterative ordinary least squares multiple regressions that were conducted using all five plausible values as the dependent variable. The models were estimated separately for mathematics and science in each of the three countries. Note that the interaction terms in grey represent predictors that were added to the conceptual equations (see Data Analysis section) when actually running the models in order to correctly specify the model statistically when multiple categorical independent variables were present. Specifically, these interaction terms are needed in the models because dummy variables are needed to represent all cross-categories otherwise the regression results are biased (Cohen et al., 2003). They are listed in grey because they are not the primary variables of interest to answer my research questions.

Model 1: $Y = \beta_0 + \beta_a age + \beta_h hmwork + \beta_l like + \beta_v value + \beta_c confident + \beta_m tchfemale + \beta_g tchage + \beta_p tchexp + \beta_d tchedu + \beta_u urbanicity$

Model 2: $Y = \beta_0 + \beta_a age + \beta_h hmwork + \beta_l like + \beta_v value + \beta_c confident + \beta_m tchfemale + \beta_g tchage + \beta_p tchexp + \beta_d tchedu + \beta_u urbanicity + \beta_f female + \beta_s SES + \beta_h hlang + \beta_i immig + \beta_b belong + \beta_{fh} female*hlang + \beta_{fi} female*immig + \beta_{hi} hlang*immig + \beta_{fm} female*tchfemale + \beta_{hm} hlang*tchfemale + \beta_{im} immig* tchfemale + \beta_{fhi} female* hlang* immig + \beta_{fhm} female*hlang*tchfemale + \beta_{fim} female*immig*tchfemale + \beta_{him} hlang* immig*tchfemale + \beta_{fhim} female* hlang* immig*tchfemale$

Model 3: $Y = \beta_0 + \beta_a age + \beta_h hmwork + \beta_l like + \beta_v value + \beta_c confident + \beta_m tchfemale + \beta_g tchage + \beta_p tchexp + \beta_d tchedu + \beta_u urbanicity + \beta_f female + \beta_s SES + \beta_h hlang + \beta_i immig + \beta_b belong + \beta_{fb} female* belong + \beta_{sb} SES* belong + \beta_{hb} hlang*belong + \beta_{ib} immig* belong + \beta_{fh} female*hlang + \beta_{fi} female*immig + \beta_{hi} hlang*immig + \beta_{fm} female*tchfemale + \beta_{hm} hlang*tchfemale + \beta_{im} immig* tchfemale + \beta_{fhi} female* hlang* immig + \beta_{fhm} female*hlang*tchfemale + \beta_{fim} female*immig*tchfemale + \beta_{him} hlang* immig*tchfemale + \beta_{fhim} female* hlang* immig*tchfemale$

Where Y is mathematics or science achievement, β_0 is the intercept, *age* is student age, *hmwork* is student time spent on mathematics or science homework per week, *like* is student likes mathematics or science, *value* is student values mathematics or science, *confident* is student confidence in mathematics or science, *tchfemale* is teacher gender, *tchage* is teacher age, *tchexp* is teacher experience, *tchedu* is teacher education level, *urbanicity* is school urbanicity, *belong* is student feelings of belongingness, *female* is student gender, *SES* is student socioeconomic status, *hlang* is student home language, *immig* is student immigrant status, and *e* is the error term.

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CHAPTER 3. GLOBAL VERSUS LOCAL INFLUENCES ON THE APPROPRIATION OF

INCLUSIVE EDUCATION POLICY IN TANZANIA

Introduction

As globalization continues to spread, educational policy is becoming increasingly influenced by global forces beyond the national borders of individual countries. For developing contexts, the global diffusion of educational ideals arguably mostly flow in a unidirectional fashion from the global North/West to the global South/East (Anderson-Levitt & Alimasi, 2001; Steiner-Khamsi, 2010). Contributing factors include the desire on the part of developing countries to be perceived as "modern" nation-states (Ramirez & Boli, 1987b; Ramirez & Ventresca, 1992), as well as the increased presence and influence of non-governmental organizations and multilateral agencies since the 1990s (Kamens & McNeely, 2009; King, 2007; Martens, 2005). Policies are transferred within the context of asymmetrical power relations, as international organizations directly or indirectly influence policy adoption in developing countries with external funds (Anderson-Levitt & Alimasi, 2001; Ginsburg, Cooper, Raghu, & Zegarra, 1991; Steiner-Khamsi, 2010). While recipient countries certainly modify or re-contextualize borrowed policies (Philips & Ochs, 2003; Schriewer, 2000; Steiner-Khamsi, 2004; Steiner-Khamsi & Stolpe, 2006), their ability to mediate global policy pressure is limited by the asymmetrical power relations that permeate the policy transfer process.

Similar to other developing nations, instrumental global influences are also evident in Tanzania's policy initiatives. Upon independence, President Nyerere developed a Three Year Development Plan for 1961-1964 to strengthen the nation's economy. In her discussion of this plan, Vavrus (2003) cautions, "Although Tanzanian in name, the plan was based primarily upon the views of the World Bank and the United States Agency for International Development

consultants who worked on it" (p. 54). With the exception of the period of African socialism and self-reliance from 1967 through the 1980s when Tanzania's policy was uniquely Tanzanian, this trend has persisted over time as the Tanzanian government has continued to seek and has needed help from national and international organizations (Vavrus, 2003). The complex interplay between global and local forces in Tanzania is summarized nicely by Samoff (1994):

> Education policy-making in Tanzania is not a solely Tanzanian activity. Like their colleagues elsewhere in Africa, Tanzanian policy-makers look to the North Atlantic for models, analyses and diagnoses, and approval. Often subtle, this deference to external authority conditions policies–from specifying what is problematic to designing intervention strategies to evaluating outcomes. Even more important, most new projects in education and even a portion of recurrent expenditures rely on externally provided funding. (p. 143)

The present study explores the interplay of global and local forces on Tanzania's policy process in the case of inclusive education reform. The primary goal of my study is to examine how global and local forces have shaped the inclusive education policy process, notably policy formation and implementation, from the perspective of key policy actors in the education sector.

Inclusive education serves as an informative and relevant case through which to analyze global and local influences in Tanzania for three main reasons. First, the global movement towards inclusion has been gaining momentum, yet the inclusive ideology has been hotly contested and no consensus has been reached as to how best to define and implement it (Kavale & Forness, 2000; Slee, 2004). The lack of a global consensus on inclusion complicates local implementation, unlike other global policies that have clear messages and signals. Steiner-Khamsi (2010) explains that policy makers only adopt rhetoric during the phase of explosive

growth during the global transfer of policies, and inclusive education as a global reform movement is at that phase. Inclusive education reform is thus at risk of being limited to rhetoric due to such inconsistencies in understanding, coupled with the fact that the inclusion movement is a relatively recent initiative. Second, Tanzania's socio-cultural, historical, economic, and political context adds a unique element to such an analysis. As will be elaborated upon below, Tanzania's history with African socialism has potential implications for inclusive education that may prove that there is a local influence on policy appropriation. Finally, as my literature review will demonstrate, students with disabilities are exceptionally educationally disadvantaged in Tanzania. To improve the state of education for students with disabilities in Tanzania, sustainable reform is needed. It is imperative that we understand the policy process behind inclusive education reform to ensure that the policy is not limited to rhetoric, but that it will lead to implementation and action.

To summarize, Tanzania like several other African nations has been influenced by and responded to Western (donor) pressures and rhetoric in the education development arena. Locally, the educational marginalization of children with disabilities in Tanzania is a serious issue requiring urgent attention. Globally, while inclusive education conversations have become more prominent, several disagreements prevail about how inclusion should be defined and implemented. In light of this, my study analyzes the influence of global and local forces on the process of inclusive education policy formation and implementation in Tanzania. National policy actors are interviewed to understand the appropriation of inclusive education policy from their perspective. To inform sustainable reform for this disadvantaged student population that moves beyond rhetoric, it is especially important to determine the extent local policy actors have mediated and adapted the global ideal of inclusion to make it appropriate for the local context.

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<center>**Relevant Background and Literature**</center>

Inclusive Education Globally

Global discourses surrounding the inclusive education movement reflect a vision of a utopia where all students with disabilities are educated alongside their non-disabled peers without discrimination. Inclusive education is characterized by a "feel-good rhetoric" with a radical humanistic philosophical premise (Armstrong, Armstrong, & Spandagou, 2010, p. 4). The interest and enthusiasm around inclusive education has been steadily growing around the world, despite inconsistencies in its definition and implementation (Slee, 2009). Such variation makes inclusion an especially interesting construct to study internationally to see how different local contexts interpret this seemingly ambiguous concept that is becoming increasingly prevalent within the global education discourse. Although inclusive education theory conceptualizes the term quite broadly by incorporating multiple forms of difference, the bulk of research and policy initiatives in this area have focused on students with disabilities (Kozleski, Artiles, & Waitoller, 2011). Consistent with this dominant discourse, this paper will focus on the inclusion of students with disabilities as well. An overview of the status of education for children with disabilities globally, as well as the key international policies which are recognized as being fundamental to the global inclusive education movement follows.

The status of education for children with disabilities globally. Disability is a major exclusionary factor when considering a child's access to a quality education, particularly in low-income countries. Of the 600 million people with disabilities in the world, 80% live in developing countries (UNESCO, 2006). One third of the estimated 77 million children who are not attending school are excluded on the basis of their disability (UNESCO, 2006). In Africa, it has been estimated that fewer than 10 percent of children with disabilities who are of school-

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going age attend school, and of those who do, the majority do so in a segregated setting (World Vision, 2007).

Global inclusive education policy landscape. Many policies have shaped the global inclusive education movement. The imperative of education for all was first recognized in the Universal Declaration of Human Rights (UN, 1948) and is stated as:

> Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory... Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace. (UN, 1948, Article 26)

At the first Education for All (EFA) conference, held in Jomtien, Thailand in 1990, every child's right to an education was further promoted globally.

Education for children with disabilities was incorporated into the United Nations Educational, Scientific and Cultural Organization (UNESCO) World Declaration on Education for All in Article 9: "The learning needs of the disabled demands special attention. Steps need to be taken to provide equal access to education to every category of disabled persons as an integral part of the education system" (UNESCO, 1990). In 1994, the Salamanca Statement and Framework for Action on Special Needs Education further increased global attention to the education of children with disabilities. It is important to highlight that the Salamanca Statement explicitly identified inclusive education as a key strategy to reach EFA goals:

> Regular schools with this inclusive orientation are the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society

and achieving education for all; moreover, they provide an effective education to the majority of children and improve the efficiency and ultimately the cost-effectiveness of the entire education system. (UNESCO, 1994, Article 2)

In 2007, the global movement towards inclusive education for children with disabilities was reiterated in the UN Convention on the Rights of Persons with Disabilities (CRPD), which states: "Parties should recognize the right of persons with disabilities to education. With a view to realizing this right without discrimination and on the basis of equal opportunity, States Parties shall ensure an inclusive education system at all levels (UN, 2007, Article 24). To date, 119 countries have signed and ratified the convention, including Tanzania[15] (UN, 2013).

Inclusive Education Locally

Moving from the global to the local, this section will examine the status of education for children with disabilities, review national level policies on inclusive education, and discuss barriers to inclusive education policy implementation in Tanzania. First, a brief overview of the Tanzanian context will be provided to contextualize the discussion on the education of students with disabilities and inclusive education. Particular attention will be paid to Tanzania's history with African socialism due to its potential implications for inclusive education.

Geographical, economic, and political context. As depicted in Figure 3.1, the United Republic of Tanzania is a country in East Africa that is bordered by Kenya and Uganda to the north; Rwanda, Burundi, and the Democratic Republic of the Condo to the west; Zambia, Malawi, and Mozambique to the south; and the Indian Ocean to the east. According to the most recent population and housing census conducted in 2012, Tanzania has a population of 44.9 million (National Bureau of Statistics, 2013).

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[15] Tanzania signed the CRPD on March 30, 2007 and ratified the convention on October 11, 2009.

Figure 3.1. Map of Tanzania and bordering countries. Adapted from "Map of Tanzania, Mozambique and neighboring countries," by WDGH Educational Foundation, 2011, retrieved from the Public Broadcasting Service website http://www.pbs.org/frontlineworld/stories/tanzania605/profile.html.

Despite aspirations of becoming a 'middle income country' by 2025 (United Republic of Tanzania, 2011), Tanzania remains one of the poorest countries of the world. According to World Bank classifications based on gross national income (GNI) per capita, Tanzania is presently classified as a 'low-income economy' with a GNI of $1,035 or less (The World Bank, 2013). Economically, Tanzania has an emerging position as a leading exporter of gold, other minerals, and gas; however the majority of the population is reliant on sustenance agriculture (Coulson, 2013). Severe food insecurity is a problem faced by many Tanzanians, particularly those living in rural areas (Phillips, 2013; World Food Programme, 2013).

Tanzania's *ujamaa* and equality African socialist ideals of the past are important to highlight when considering the inclusive education of students with disabilities. Tungaraza (1994) suggests that the plight of individuals with disabilities in Tanzania may very well have been viewed differently due to the nation's African socialism ideology. After independence in 1961 from colonial rule by the British and Germans, Tanzania's founding President Julius Nyerere released the Arusha Declaration or 'blueprint for socialist development' in February of 1967. The Arusha Declaration marked a radical turning point in Tanzanian politics (Nyerere, 1968). Among its numerous components was the establishment of ujamaa, which Nyerere himself translated as 'familyhood' (Coulson, 2013). In March of 1967, a subsequent policy statement entitled Education for Self-Reliance (ESR) was put forth by Nyerere. ESR served as the educational component of Nyerere's ujamaa program, and was designed to reduce regional, ethnic, and class inequalities throughout the education system (Vavrus, 2003). Although there was no direct link between disability and ujamaa in the ESR, there is some evidence of a connection between Nyerere's African socialist ideals and his approach to education. When laying a stone for a school of the deaf in 1974, Nyerere was quoted as stating that it is the responsibility of the people of Tanzania to "ensure that these children have the opportunity to enter regular schools and to make sure we help them in their problems" (as cited in Tungaraza, 1994). This statement reflects the collective responsibility of all Tanzanians to include and support children with disabilities, which aligns with the focus of ESR on addressing educational inequalities. Nyerere retired as President in 1985, but his influence on Tanzanian politics continued through his friends and contacts in the government up until his death in 1999 (Coulson, 2013). By analyzing global and local influences on inclusive education reform, this

study will be able to determine whether the ujamaa political spirit of the past influenced the formation and implementation of inclusive education reforms of present day Tanzania.

Inclusive education policy landscape in Tanzania. Tanzania is a signatory to several international conventions that promote education for all, such as the United Nations Universal Declaration of Human Rights (UN, 1948) and the Convention on the Rights of the Child (UN, 1989). In terms of national Tanzanian policy, in 2004 the Ministry of Labour, Youth Development and Sports (MoLYDS) released the National Policy on Disability (NPD). The NPD touches on multiple policy issues for individuals with disabilities, such as health, early intervention, HIV/AIDS, education, employment, accessibility, and care. The NPD defines the policy issue of education as:

> Education is key to the development of children with disabilities' potential. The education policy emphasizes the availability of early learning and basic education to all children aged 7 years and that children with disabilities will be given a priority. Despite this commitment the educational system is inaccessible to children with disabilities.
>
> (MoLYDS, 2004, Article 3.8)

To address this policy problem, the NPD provides the following policy statement, "The government in collaboration with stakeholders shall provide a conducive environment for inclusive education that takes care of special needs of disabled children" (MoLYDS, 2004, Article 3.8).

In 2009, the Ministry of Education and Vocational Training (MoEVT) published the National Strategy on Inclusive Education 2009-2017, whose stated overall goal is that, "All children, youth and adults in Tanzania will have equitable access to quality education in

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inclusive settings" (p. 3). The National Strategy on Inclusive Education defines inclusive

education as:

> Inclusive education is a system of education in which all children, youths and adults are
>
> enrolled, actively participate and achieve in regular schools and other educational
>
> programmes regardless of their diverse backgrounds and abilities, without discrimination,
>
> through minimization of barriers and maximization of resources. (MoEVT, 2009, p. 2).

The policy document then goes on to specify multiple objectives and strategic areas of action

including having education policies and programs informed by inclusive values and practices,

teaching and learning which is responsive to the diverse needs of learners, educational support

for all learners, strengthened professional capabilities, and enhanced community partnership and

participation in inclusive education. It should be noted that the language of these local

documents is quite broad, and the specific means of how to attain the stated objectives and

strategic areas of action are not clearly detailed.

In summary, Tanzania has signed numerous international conventions related to

education for all and to inclusive education. Additionally, similar to international policies on

disability, Tanzania's national education policies clearly state inclusive education as the desired

approach to educating students with disabilities.

The status of education for children with disabilities in Tanzania. There appears to

be a disconnect between the policy rhetoric around inclusion with the lived educational

experiences of children with disabilities in Tanzania. Unfortunately in spite of the spirit of

ujamaa, compared to other African countries issues of the education of students with disabilities

are under addressed in Tanzania (Chataika, Mckenzie, Swart & Lyner-Cleophas, 2012). It is

estimated that 2.4 million people in Tanzania have a disability and that the prevalence of

disability in Tanzania is approximately 8% (United Republic of Tanzania, 2009; World Health

Organization, 2004). However, it is important to note that these statistics should be interpreted

with caution because it is generally agreed that information and statistics on disability in

developing countries is unreliable and incomplete (International Labour Office, 2004; UNESCO,

2010; UNICEF, 2008).

In Tanzania, having a disability doubles the probability of children never attending

school (United Republic of Tanzania, 2009). It is estimated that less than 40% of children with

disabilities are enrolled in primary school and less than 2% are enrolled in special education

programs (Njelesani, Couto, & Cameron, 2011). This alarmingly high proportion of out-of-

school children with disabilities appears to be relatively consistent across studies. For instance,

in a study of children with mental disabilities in Tanzania by Mbwilo, Smide, and Aarts (2010),

the majority of their sample (58%) never attended school.

According to the most recent United Republic of Tanzania Ministry of Education and

Vocational Training (MoEVT) Basic Education Statistics Tanzania (BEST) data from 2010,

there were a total of 36,252 children with disabilities enrolled in primary school[16] (MoEVT,

2011). As illustrated in Table 3.1, the majority of these students were physically impaired

(38%), followed by mentally impaired (22%), and deaf/mute (13%). Given that primary schools

fees were abolished in 2000 in Tanzania (Coulson, 2013) but secondary schools still charge

school tuition fees, it is not surprising that the statistics for secondary school enrollment are

significantly lower than that of primary. According to the BEST data, only 5,265 children with

disabilities were enrolled in secondary school in 2010. Table 3.1 shows similar disability

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[16] The structure of formal schooling in Tanzania constitutes 7 years of primary school (Standards 1-7 for children aged 7-13 years), 4 years of junior secondary or O (ordinary) level (Forms 1-4 for children aged 14-17 years), 2 years of senior secondary or A (advanced) level (Forms 5-6 for children aged 18-19 years), and 1-3 years of tertiary education (for adults aged 20+ years).

category enrollment patterns at the primary and secondary levels, with the majority of secondary students with disabilities being physically impaired (54%), followed by other (12%), visually impaired (10%), and deaf/mute (10%).

Table 3.1
School Enrollment in Tanzania by Disability Category

Disability Category	Primary		Secondary	
	Raw Count	%	Raw Count	%
Albino	2,381	6.6	331	6.3
Autism	557	1.5	33	0.6
Deaf/Mute	4,716	13.0	520	9.9
Deaf/Blind	1,345	3.7	155	2.9
Mentally Impaired	7,936	21.9	170	3.2
Multi-Impaired	665	1.8	61	1.2
Others	3,304	9.1	631	12.0
Physically Impaired	13,782	38.0	2,825	53.7
Visually Impaired	1,566	4.3	539	10.2
Total disabled	36,252	100	5,265	100
Total non-disabled	8,419,305		1,638,699	

Note. Table created using Basic Education Statistics Tanzania (BEST) online Data Center 2010 data (MoVET, 2011).

Moreover, Table 3.1 provides insight into the disproportionate amount of students with disabilities compared to students without disabilities that are attending school in Tanzania. The figures in Table 3.1 show that there are 232 times as many non-disabled pupils as there are disabled pupils enrolled in primary school (36,252 disabled compared to 8,419,305 non-disabled). This disparity increases at the secondary level, as there are 311 times as many non-disabled pupils as there are disabled pupils enrolled in secondary school (5,265 disabled compared to 1,638,699 non-disabled). Presenting these statistics another way, a mere 0.4% of

the total primary school student population has disabilities, and only 0.3% of the total secondary student population has disabilities. Comparing these percentages with the estimated 8% disability prevalence rate in Tanzania, a large discrepancy appears to exist, suggesting that many students with disabilities in Tanzania are not in school.

For children with disabilities that do attend school, Tanzania has adopted three primary approaches to educating students with disabilities: special schools, integrated schools and inclusive schools (Mkumbo, 2008). Special schools are the most segregated setting, as they only house students with identified disabilities. Special schools cater specifically to students with disabilities and focus on serving those with a particular type of disability, such as blind or deaf learners. Due to their history, special schools in Tanzania are closely tied to religion, since special schools evolved out of the European Christian missionary movement of the 19th century (Kiyaga & Moores, 2003; Tungaraza, 1994). Integrated schools are slightly less segregated than special schools, as they educate students with disabilities in mainstream schools but in separate special classrooms. Akin to special schools, physical division still exists in integrated schools because students with disabilities are separated from their mainstream peers, albeit the degree of separation is at the classroom level as opposed to the school level. Finally, in contrast to special schools and integrated schools, inclusive schools are not segregated at all. Inclusive schools educate students with disabilities in the same educational environment as their non-disabled peers. The vast majority of children with disabilities in Tanzania attend either special schools or integrated schools (Mkumbo, 2008). Additional evidence on school provision for students with disabilities is provided by Mamdani, Rajani, Leach, Tumbo-Masabo, and Omondi (2009) who reported that little inclusive education is practiced in the vast majority of schools and only a handful of special education schools exist. Together, these findings suggest that children with

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disabilities have limited access to inclusive schools in Tanzania, although more current data is needed.

A final factor to consider regarding the education of students with disabilities in Tanzania is the location of schools that serve students with disabilities. Although the vast majority of children with disabilities in Tanzania live in rural areas, special education facilities are concentrated in urban areas (Kisanji, 1993; Marshall, 1997a; Njelesani et al., 2011). An absence of special education facilities in rural areas has led to what Kisanji (1998) and Nambira (1994) refer to as the 'casual integration' of children with special needs. These authors critique casual integration because students with disabilities do not receive any learning support, in large part because teachers of regular schools are not adequately trained to teach students with disabilities. Furthermore, children who are casually integrated have no 'official' existence (Miles, 1989). Casually integrated children have somewhat of an invisible status in the education system because there is no official education identification or documentation of these students and their unique learning needs. In sum, existing evidence suggests that children with disabilities are educationally disadvantaged and experience multiple barriers to accessing quality education in Tanzania. Such realities are inconsistent with Tanzania's policy rhetoric which promotes an inclusive quality education for all students, including those with disabilities.

Barriers to inclusive education policy implementation in Tanzania. As noted in the previous sections despite having such progressive policies, the educational condition of children with disabilities leaves a lot to be desired in Tanzania. Evidence suggests that while many developing countries have developed educational policies that recognize inclusion as a desirable form of education for students with disabilities, inclusion is not being adequately implemented (Eleweke & Rodda, 2002). Studies on the topic of inclusive education in sub-Saharan Africa

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more broadly and in Tanzania specifically identify multiple barriers to inclusive education policy implementation. Common barriers that are reported in the literature include physical barriers such as inaccessible school infrastructure and transportation issues; attitudinal barriers such as insensitivity and discrimination by teachers, principals, peers, and society at large and ashamed parents hiding children with disabilities at home instead of enrolling them in school; a lack of teaching and learning materials and resources needed to facilitate the learning of students with disabilities; and a lack of teacher training in special education and inclusive education practices which is related to poor identification and recognition of disability and special needs (Chataika et al., 2012; Eleweke & Rodda, 2002; Marshall, 1997a, 1997b; Mbwilo et al., 2010; Miles, 2011; Mkumbo, 2008; Mnyani, 2009; Woods, 2008).

In Africa, one of the major obstacles to inclusion has been a lack of support on the part of governments in terms of planning and resource provision (Abosi, 1996). This is consistent with the findings of the most comprehensive assessment of inclusive education done in Tanzania to date by Mkumbo (2008) in conjunction with HakiElimu, a non-governmental organization (NGO) focused on issues of equity and education. In their study of six districts in Tanzania, Mkumbo identified the biggest barrier as the lack of a concerted institutionalized effort. Mkumbo argued that policymakers lacked political will and criticized the government for failing to mention disability in key educational policy documents, as well as NGOs concerned with education for leaving disability out of their statutes.

Overall, despite the promotion of increased access to education for children with disabilities propagated by Tanzania's national inclusive education policy framework, many students with disabilities remain out of school and face numerous barriers to accessing an inclusive quality education where their academic and social development can be fostered. With

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the goal of informing sustainable inclusive education reform in Tanzania, my study investigates how global and local forces have shaped the formation and implementation of inclusive education policy from the perspective of key education sector policy actors working in the government and non-governmental organizations (NGOs). It is important to determine the extent to which local policy actors have mediated and adapted the global ideal of inclusion to make it appropriate for the local context to determine whether inclusive education reform efforts can advance beyond rhetoric.

Theoretical Framework

Global and local forces are a central component of this study's theoretical framework. A dichotomy appears to exist within the field of comparative education, where some scholars apply a global model of education such as sociology's neo-institutionalism or world culture theory (e.g., Boli, 2005; Ramirez & Boli, 1987a), while others from an anthropological or externalization persuasion focus on local variation and agency at the national, district, and classroom levels (e.g., Schriewer & Martinez, 2004; Takayama, 2010). Instead of focusing only on the global or the local level, Anderson-Levitt (2003) encourages us to unite both approaches in her comment, "If we take seriously both local variability and world culture theory, we recognize that each perspective on its own misses something crucial" (p. 18). Similarly, Arnove (1999) stresses the importance of understanding the interactive process between the global and the local, as well as its tensions and contradictions. In alignment with the sentiments expressed by Anderson-Levitt and Arnove, my study attempts to understand how global and the local forces intersect through the appropriation of inclusive education policy reform in Tanzania.

Another component of my study's theoretical framework is the application of a sociocultural approach to educational policy analysis, which emphasizes power, process, and

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practice (Ball, 1994; Levinson & Sutton, 2001). Levinson and Sutton (2001) propose a sociocultural approach to policy analysis and conceptualize policy as "a complex social practice, an ongoing process of normative cultural production constituted by diverse actors across diverse social and institutional contexts" (p. 1). The present study will apply a sociocultural approach to the analysis of inclusive education policy in Tanzania in order to understand how the policy is appropriated by national policy actors, analyzing the influence of global and local forces on the process of policy formation and implementation.

Finally, this study adopts an interpretivist epistemological approach. The central purpose for research within an interpretivist paradigm is to *understand* (Glesne, 2011). This purpose fits with the primary goal of this study to understand how inclusive education policy has been appropriated in Tanzania from the perspective of key policy actors in the education sector. Furthermore, this study is aligned with the interpretivist approach because it meets the approach's two assumptions that reality is socially constructed and that variables are complex, interwoven and difficult to measure (Glesne, 2011). Regarding the latter assumption, this study assumes that there are many global and local socio-cultural, historical, economic and political variables that influence these policies and are complex, interwoven, difficult to measure, and at times contradictory. A visual representation of these global and local variables in relation to the process of inclusive education policy appropriation in Tanzania is depicted in Figure 3.2. As depicted by the gradient arrow labeled "focus of study" on the left side of Figure 3.2, this study primarily focuses on the upper portions of the figure by interviewing national policy actors.
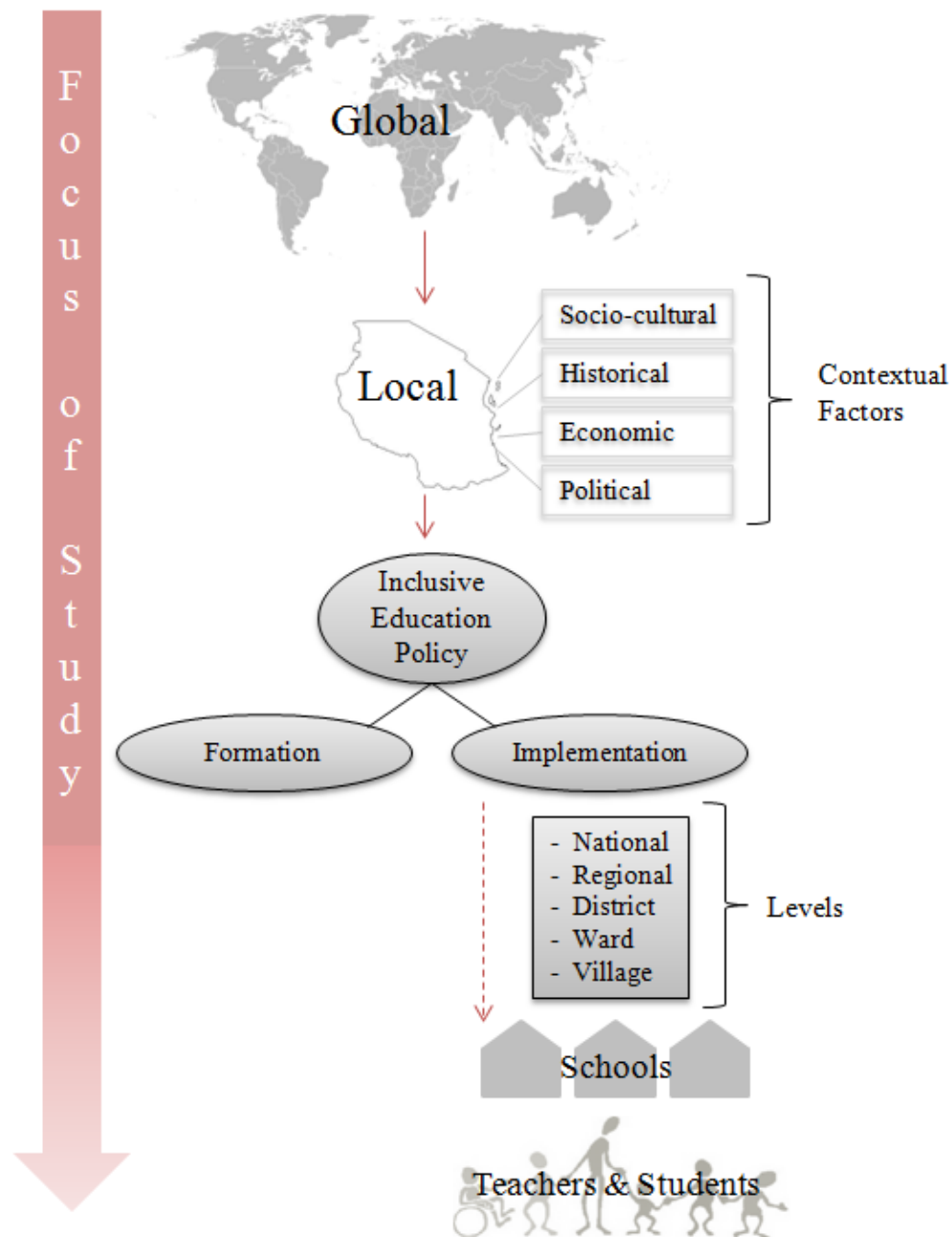
Figure 3.2. Theoretical framework.

Research Questions

The purpose of this study is to understand the appropriation – commonly referred to as the formation and implementation (Koyama, 2009) – of inclusive education policy in Tanzania in relation to global and local forces. To achieve this understanding, I ask the following research questions:

RQ1. How do local factors shape the formation and implementation of inclusive

    education policy in Tanzania?

    RQ1a. What barriers to inclusive education policy implementation do local actors

        experience and how are they related to local contextual factors?

RQ2. How do global factors shape the formation and implementation of inclusive

    education policy in Tanzania?

RQ3. How do these local and global forces intersect and diverge in their influence on the

    formation and implementation of inclusive education policy in Tanzania?

    RQ3a. At the local level, is there any evidence of resistance, adaptation, and

        subterfuge to global inclusive education forces?

The first question corresponds to understanding local influences on the appropriation of inclusive education policy, and the second to understanding global influences. The third question brings the two levels together and explores the constructed and contested relationship between them.

Method

Two qualitative methods were used to investigate my research questions. The primary method was semi-structured interviews and the supplemental method was document analysis. Semi-structured interviews were conducted to collect in-depth information about the experiences and perspectives of national policy actors about the appropriation of inclusive education policy. Additionally, documents collected from participants provided background information on inclusive education policy in Tanzania and implementation efforts. More details about the participants and method are provided below.

Participants

A total of 20 policy actors operating at the national level in Dar es Salaam, Tanzania participated in semi-structured interviews with the researcher. Although Dodoma is the official capital city of Tanzania, Dar es Salaam was selected as the location for this study because it serves as Tanzania's main commercial city and many government offices are located there. To be included in the study, all participants were required to have knowledge about or personal experience with inclusive education policy formation and/or implementation in Tanzania. In addition, participants had to have a current or past formal appointment with the government or an NGO that has participated in inclusive education reform efforts. Individuals who did not meet these inclusion criteria were excluded from participation.

The sample consisted of 3 national government education officials, 15 staff members from education and disability NGOs, and 2 faculty members. The categorization of all participants is described below and is summarized in Figure 3.3.
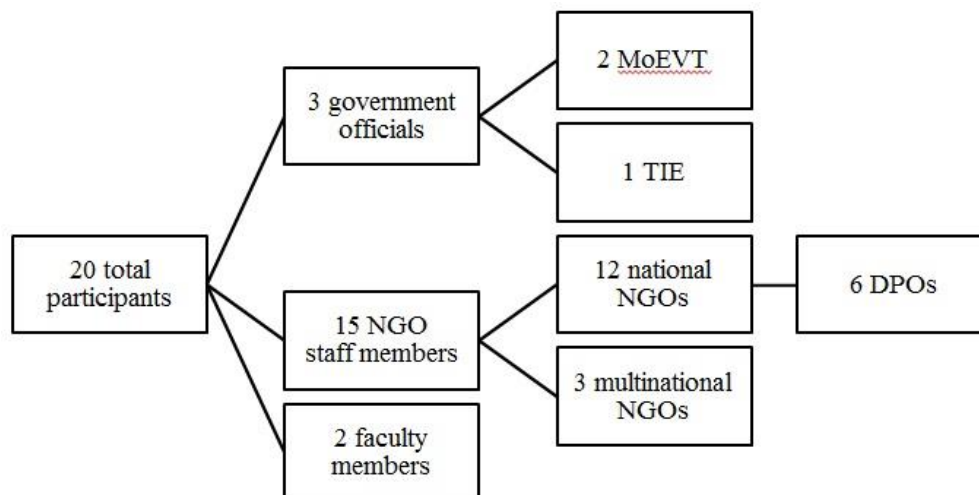

Figure 3.3. Participant categorization summary.

Government officials. Of the three government officials, two were from the Untied Republic of Tanzania's Ministry of Education and Vocational Training (MoEVT) and one was from the Tanzania Institute of Education (TIE). The TIE is the MoEVT agency responsible for

curriculum development. The TIE participant worked in the area of special education curriculum development. The organization structure of the MoEVT is divided into 21 divisions and units[17]. One participant was from the ministry's Special Needs Education Unit and the other was from the Adult and Non-Formal Education Division.

     NGO staff members. Twelve of the NGO staff members were from national NGOs and three were from multinational NGOs that operated in one or more countries in addition to Tanzania. The majority of NGO staff whom I interviewed held high-ranking leadership positions within the organization, such as Secretary General, Coordinator, and Program Officer. An important distinction among disability NGOs that I learned once I was in the field is what is referred to as Disabled People's Organizations (DPOs). DPOs are registered non-governmental organizations that are founded and operated by people who have disabilities themselves, as opposed to organizations that are founded and operated by people without disabilities. The latter was referred to as Organizations *for* People with Disabilities, indicating that the organization is largely run by people without disabilities (although this does not necessarily mean that absolutely no people with disabilities are on staff) to advocate on behalf of and serve those with disabilities. In Tanzania there is a formal hierarchical structure of ten national DPOs that are organized under the Tanzania Federation of Disabled People's Organizations or Shirikisho la Vyama Vya Watu Wenye Ulemavu Tanzania (SHIVYAWATA). The national Tanzanian DPO structure is depicted in Figure 3.4. I was able to interview representatives from six DPOs.

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[17] The 21 MoEVT divisions and units include the Higher Education Division, Technical and Vocation Education Training Division, Adult and Non-Formal Education Division, Teachers Education Division, School Inspectorate Division, Special Needs Education Unit, Diversity Unit, Education by Media Unit, School Registration Unit, Pre Primary and Primary Education Unit, Secondary Education Unit, Policy Planning Division, Administration and Human Resources Management Division, Procurement Management Unit, Finance and Accounts Unit, Internal Audit Unit, Government Communication Unit, Legal Services Unit, Information and Communication Technology Unit, National Commission for UNESCO, and Zonal and District Offices (MoVET, 2013).
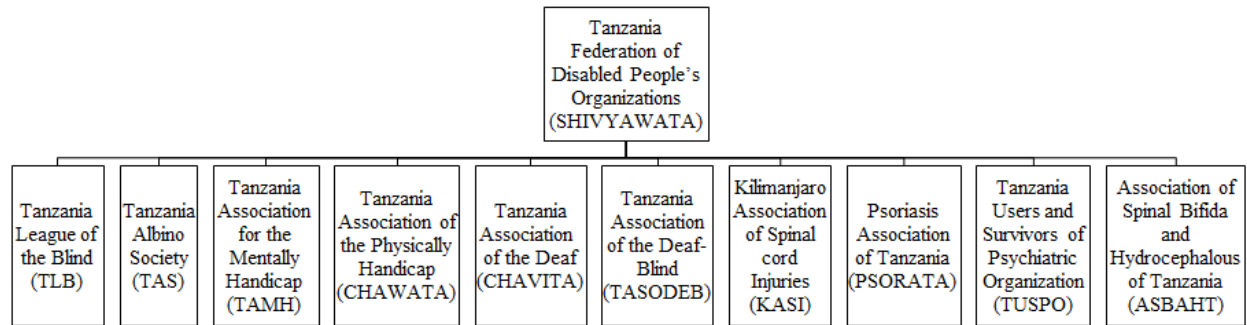
Figure 3.4. National DPO structure in Tanzania.

Faculty members. The two faculty participants were from the education department in large, national universities in Dar es Salaam. Faculty interviews provided the researcher with helpful background and contextual information.

Sampling Procedure

A combination of purposive and snowball sampling was used to identify and recruit participants. First, purposive sampling was used to identify and recruit participants who were most likely to have sufficient knowledge of and/or experience with inclusive education policy formation and implementation initiatives. Selection of eligible participants was done in consultation with faculty member contacts in Tanzania with local knowledge about inclusive education reform in Tanzania, as well as the nation's ministerial and NGO structure. Additionally, with the goal of incorporating diverse perspectives across multiple disability types in my sample, I purposefully recruited from all DPOs. Eligible participants were contacted via email, mobile phone, and in person to ask if they were willing to participate in my study.

At the conclusion of each interview, I asked each participant whether they had any recommendations for additional government officials or NGO staff whom I should interview that would be able to talk to me about inclusive education policy formation and implementation (see final question in interview protocols in Appendix A). For this snowball portion of my sampling

procedure, I would then contact, recruit, and interview the informants that my participants recommend until my sample became saturated (i.e., no new informant names were recommended and I had a wide representation of government and NGO perspectives represented in my data). My sample reached saturation at 20 participants.

Data Collection Procedure

This study employed two methods of data collection: semi-structured interviews and documents. Using the attached interview protocols (see Appendix A), I interviewed national policy actors about the formation of inclusive education policy in Tanzania and their organization's strategies for implementation. In addition, as part of the interview I asked participants for paper or electronic copies of relevant inclusive education policy documents. Each interview was approximately one hour in duration. All interviews were audio recorded with written participant consent (see informed consent forms in Appendix B), so that the interviews could be later transcribed. Interviews took place in a location of the participant's choosing, most often in the participant's office. The majority of the interviews were one-on-one with a participant and I, but there were a few instances where I interviewed two to three individuals from the same organization together. In the latter instances, I counted each group interview as one interview.

Tanzania's two official languages are English and Kiswahili. All interviews were conducted in English because English is the language of commerce and it was anticipated that all participants would be proficient in spoken English due to their occupations as high-ranking policy officials and NGO staff members. Copies of the informed consent forms were provided to all participants in both languages (see Appendix B) in case they preferred to read Kiswahili instead of English, but the majority of participants selected the English form. Additionally,

participants were informed that if they preferred to be interviewed in Kiswahili instead of English, the interview could be conducted through a hired translator. However, all participants chose to be interviewed in English. My data collection procedures were approved by the Michigan State University Institutional Review Board (IRB# x13-992e; i044630) and the Tanzania Commission for Science and Technology (COSTECH).

Researcher Positionality

The purpose of my interpretive approach was to gain an understanding of how inclusive education policy is being appropriated in Tanzania from the perspective of key policy actors in the education sector. As a white woman visiting Tanzania from the global North/West, I actively attempted to resist falling into the stereotype of a privileged international expert coming with all of the answers. Instead, I tried to position myself as a researcher whose goal was to share Tanzanian voices and experiences. To do so, I feel that my social status as a female and as a student helped me convey my genuine search for meaning and understanding. Although my language ability was limited, I did my best to practice customary greetings in Kiswahili and express my gratitude for my participants' time and valuable contribution to my research. To help build rapport, I also strove to connect with each of my participants through our shared moral commitment to children with disabilities, trying to position myself as a comrade or fellow advocate. Participants from disability NGOs especially seemed to appreciate my interest in including their respective disability group in my research and in learning about their efforts in Tanzania so that I can share it with a wider global audience.

Admittedly, my 'outsider' status amplified by the color of my skin and hair, my dress, and my language limited the extent to which I could connect with my participants. While I feel that my demeanor articulated above enabled me to attain insightful responses to my interview

questions, I also feel that I had to frequently navigate the challenge of peeling away the layers of politically correct responses to uncover true perspectives. Some participants, particularly government officials, were brief with some of their answers and I had to consistently probe further throughout the interviews. Even so, I feel that many of my participants were very open with me and I believe that the data I was able to obtain provides interesting insights into multiple Tanzanian perspectives and experiences of inclusive education policy appropriation.

Data Organization and Analytical Approach

During my time in the field, I recorded field notes and themes in a personal notebook. I also developed weekly summary reports of my activities, emerging themes and findings, and upcoming data collection plans and strategies. These weekly summaries helped me focus my data collection efforts on emerging themes and identify areas of confusion to ask future participants about to help clarify my understanding. For example, when interviewing my first government official I quickly realized that he and I had different understandings of what constitutes a policy; I perceived the National Strategy on Inclusive Education 2009-2017 as a policy but he did not. Instead, he asserted that it was a strategy, which seemed to hold different meaning to him beyond a subtle difference in nomenclature. In addition to probing him further to try and understand the definitional disconnect, in future interviews I asked participants to clarify for me the difference between a government policy compared to a strategy.

Audio recordings of interviews were transcribed and subsequently coded to identify themes related to the formation and implementation of inclusive education policy in Tanzania. I analyzed my data with an eye towards patterns, relationships, and divergent cases as Erickson (1986) recommends. To explain, I looked for patterns in how participants reported inclusive education policy being formed and implemented across time and space in Tanzania. Applying

my global versus local theoretical framework to my data analysis, I looked for relationships and interactions between global and local influences on Tanzania's inclusive education policy appropriation. When exploring this global versus local relationship with inclusive education policy appropriation, I looked for instances where their respective influence and actions intersected and diverged. Furthermore, as part of my analysis of local influences, I looked for relationships between policy appropriation and Tanzania's contextual socio-cultural, historical, economic and political factors. To help me answer my research questions, first I applied what Hatch (2002) refers to as a post positivist perspective and typological approach to analysis by using the following a priori themes: global, local, socio-cultural, historical, economic, and political factors. After I coded my data using these a priori themes, I then looked at my data to see what additional themes emerged so that I did not unnecessarily limit the scope of my interpretations.

Results

All identified themes and supporting evidence are reported in relation to each of my research questions.

RQ1. Local Influence on Inclusive Education Policy Appropriation

From the perspectives of the policy actors I interviewed, the most influential local factors impacting inclusive education policy appropriation in Tanzania fall under three main categories: socio-cultural beliefs, political context, and economic conditions. I developed these three main categories from my a priori themes of local socio-cultural, economic, and political factors. Within these larger categories the following subcategories emerged from the data: cultural attitudes towards disability, stakeholder collaboration, political will, government budget, and familial economic constraints.

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Stigmatizing cultural attitudes towards disability. Socio-cultural beliefs, specifically cultural attitudes towards disability, were commonly reported as playing a vital role in the appropriation of inclusive education policy. Participants explained that the vast majority of Tanzanians have negative attitudes towards people with disabilities and there is a great deal of stigma and discrimination associated with disability. To illustrate the general cultural attitude towards disability, an NGO representative explained:

> The general attitude of people with disability is more of, you know, it's, it's put them at a distance. It's not real inclusive if you want to use the word. Umm it's them and us, it's still like that. And so there a lot of attitudes that are need to be changed.

In some cases there were religious or spiritual beliefs associated with comments about cultural attitudes towards disability. For example, a handful of individuals used the word "cursed" to describe traditional cultural beliefs and understandings about disability. Also, this comment from an NGO staff member explicitly mentions God as playing a role in creating disability: *"Social context that many parents they feel that having a disabled child it's not a blessing from God, and they regret."*

Additionally, the following two quotations from different NGO representatives provide further insight into the social shame of bearing a child with a disability: *"Most of the time someone having a child with disability, generally speaking it's a shame. They don't come in front of people and say, 'This is my child!' It is a shame, you see?"* and, *"You know the habit was once a baby is born with albinism in the family, the father is the first to run away saying, 'That this is not my kid. Where did you find this boy?'"* Likewise, this statement from another NGO representative shows the gravity of social stigma around disability in Tanzania: *"What you*

should know is that the level of stigma is very high here. And every service, every service to any

person, to any person with disability revolve around stigma. The main barrier is stigma."

These types of negative attitudes towards disability appear to span all levels of society, including the government. The widespread nature of these beliefs about disability can potentially limit inclusive education efforts, which is implied in the following quotation from an NGO representative:

> *Most of disabilities are associated with suppression, troubles, are a lot of troubles which*
>
> *are very difficult to dismantle. So what you will know is that stigma is very high. And*
>
> *when you want to get any information how far is the progress of inclusive education in*
>
> *Tanzania you should know that stigma is still in the level of the government.*

In addition to negative attitudes towards disability in general, multiple participants discussed cultural beliefs about albinism specifically. Albinism is one type of disability that is socially and politically recognized in Tanzania which has created a lot of public controversy, so it is important to highlight these perspectives for this particular cultural context. In Tanzania people with albinism seem to be especially at risk of social discrimination, stigma, and physical harm. I noticed this even when looking through a local newspaper during my time in the field. News stories and corresponding photos like the ones pictured in Figure 3.5 were quite commonplace.

Figure 3.5. Sample newspaper clippings of individuals with albinism whose limbs had been chopped off. Source: The Citizen, May 25, 2014, p. 28 (left), May 21, 2014, p. 15 (right).

Insight into the socio-cultural beliefs about individuals with albinism can be seen from the following childhood memory shared by an NGO representative:

> *When we were born I saw one albino and I asked my mother, "Who is this?" and she told me, "It is an albino and they call him a Zeruzeru." It is an albino and she said, "These people do not die." And I asked, "Why?" She said "No you can't see they just disappear." It is because albinos was born to be buried, people will kill and hide. So they were believing that albino just evaporate (laughing)! Because the, I came to learn that it was because people were killing them! And they were hiding them somewhere, secretly, secretly hide them in secret.*

With the increased media coverage on albino mutilation and killings, there is more public scrutiny about this behavior. However, multiple people I spoke with told me that albino killings are still taking place secretly in present day Tanzania, so it is still a pertinent issue from their perspective.

Like the general cultural attitudes towards disability, my data suggests that the cultural beliefs about albinism may also transcend into the Tanzanian government. A primary reason for

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this appears to be the cultural beliefs that justify the actions. During our discussion about albino killings, an NGO representative who was an albino himself explained his understanding of the rationale behind the behavior and provided multiple examples:

> *Even the member of the government are doing. Because there is belief that if you have a blood, or finger or any part of a person with albinism, when treated with maybe rituals they can bring victory to elections maybe. Uh you may win in economic, and maybe in the Lake Zone you may net a lot of fish! You may do better in the business, and so forth and so forth. So it is work of the witchdoctor who say if you want to become say a member of parliament, if you want to become a president, if you want to become rich bring me ABC of a person with albinism. So you find people looking for person with albinism for their body parts.*

This particular individual continued to express his concern that albino killings by government officials were actually going to increase over the next two years during the local government elections and the general elections. He explained that these types of cases have historically been much more rampant during election cycles due to beliefs about the prosperity that albino body parts can bring.

Overall, in Tanzania there seems to be widespread stigma, discrimination, and negative attitudes towards disability in local communities and perhaps even upwards into the government. There is a clear sense that disability is an undesirable form of difference and people with disabilities are often considered social outcasts. The case of albinism as a type of disability appears to be especially extreme in how these individuals are almost seen as subhuman and worthy of death for the purpose of individual gain and success. These types of socio-cultural beliefs about disability conceivably pose a great challenge for moving inclusive education

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implementation forward because the lack of social acceptance of disability directly opposes the ideals of inclusive education. Furthermore, to the extent such beliefs may be present within the government, if community and national leaders do not value or support disability then it is difficult to convince the greater society of its importance.

Political context. In addition to socio-cultural beliefs about disability, the political context is another key factor that impacts inclusive education policy appropriation in multiple ways. Political context appears to be most important in terms of stakeholder collaboration in policy formation and the political will of the government to implement inclusive education policy. Both of these political elements will be discussed below.

Stakeholder collaboration. When I asked about policy formation, participants consistently explained that the policy process in Tanzania is very structured and involves multiple meetings with stakeholders before a given policy is officially approved by all of the necessary levels of government. Representatives from nearly all of the NGOs that I conducted interviews with were formally invited by the Ministry of Education and Vocational Training (MoEVT) to one to two meetings designed to provide them with opportunities to give feedback on drafts of the National Strategy on Inclusive Education 2009-2017. The perceived participatory and collaborative nature of inclusive education policy formation is illustrated by the following quotation from an NGO representative:

> *The whole policy development here, you learn from others, it is participatory. It is participatory. It involves quite a number of stakeholders meeting before it is even go to the government to restructure. Back and forth with stakeholder reading the document, stakeholders. It's not the issue of the government; writing the policy basically is people writing the policy, it's so collaborative.*

Participant perspectives varied considerably concerning the degree to which the structured stakeholder collaboration element of the inclusive education policy formation process was truly collaborative. While the previous quotation reflects a very positive perspective, other viewpoints were more negative. For instance, some NGO staff members who attended these meetings shared that they did not feel that their recommendations were adequately taken into account by the government. From the perspective of one NGO representative, the government appointed a small group of people to write the policy independently without the active contribution of the disabled community:

> *And this is also a problem managing from the inclusion issue during the formation of the act. Yeah,* [the government] *find some people who sings that they can do it and hide themselves under the shade do the work without involving people with disability themselves.*

Additionally, there appeared to be some suspicion among participants that the government exerted its bureaucratic control to promote its own interests by purposefully selecting individuals with similar political leanings to participate in the inclusive education policy formation process. Specifically, an NGO representative disclosed:

> *If you don't belong to a ruling party say, it's very hard for you to be appointed into the team to work on the policy paper of inclusion. So apart from being involving non-state actors, the non-state actors have to be loyal to the ruling party. So this is the problem although they were included but only those who were loyal to the government. The impact is that they are not going to be very critical to the policy… giving opportunity to speak, opportunity to act which is very much limited in the country. So whichever party comes into power will have its own controlling mechanism.*

Overall, there was a clear consensus that there was a formal structured collaborative political process during the formation of Tanzania's National Strategy on Inclusive Education 2009-2017. This collaborative element seemed to be a valued characteristic of policy formation in Tanzania. Perspectives about how the collaborative process unfolded differed among participants, with expressing positive viewpoints and others were more negative. So while the formal political process is important, the nature of collaboration between stakeholders remains unclear.

   Political will. "Political will" is a common term that I heard consistently throughout my interviews with NGO representatives and even government officials themselves. Most often lack of political will was discussed as a major barrier to inclusive education policy implementation. The one exception to this was an NGO staff member who interpreted the existence of a national inclusive education policy as evidence of the political will of the government to support inclusive education. But even that particular individual acknowledged that there has been limited implementation by the government, as can be seen in his comment, *"The government has made a commitment, a very positive commitment in this area. So what remains is to actualize it, you know?"*

   The vast majority of participants felt that there was a lack of political will on the part of the Tanzanian government to actualize inclusive education. The blatancy of this issue is evident in the following response of an NGO representative when asked what impedes inclusive education in Tanzania:

   What I can say? Lack of political will (laughing). *In terms of, because inclusive*
   education requires a dramatic change of the policy system so that it made the element of
   the inclusiveness…I know it is a process and it takes time, but not, so far I think we

haven't done much. Not much has been done…so to me I see, like, that is really from the

decision makers and that is the government.

This individual identifies the government and its lack of political will as the primary reason that limited progress has been made towards inclusive education policy implementation.

Likewise, when asked if inclusive education is a priority of the government, a participant from another NGO replied, "*It is not a priority. No, no!* (laughing)." My conversations with participants about the relative prioritization of inclusive education by the government compared to other areas reveal some nuances to consider in relation to political will. Expanding secondary education was cited as a major education initiative that the government has been focusing on over the past decade. The prioritization of secondary education over inclusive education can be seen in the following comment by an NGO representative, "*Secondary schools – here in the country now that is education. But when we are talking about inclusive education, it's something that we wish to happen, but we have to make sure that some other general concerns are addressed first.*"

In addition to secondary education, multiple participants identified teacher absenteeism as another important issue that the government is working to address before it can focus on inclusive education. An NGO representative described, "*Take the current situation: the government is getting big headache about teachers…teachers are striking, they are not going to schools.*" She then went on to explain that addressing teacher absenteeism is a more pressing need than inclusive education and stated that inclusive education is not a priority because, "*there are different priorities according to existing problems.*"

In sum, time and time again, participants brought up political will as an important factor to consider in relation to inclusive education policy implementation. The majority clearly felt

that the government was not committed to inclusive education. The issue of political will becomes more nuanced when considering inclusive education relative to other educational challenges that the government is confronted with. Currently, the government seems to be prioritizing other areas above inclusive education.

Economic conditions. Participants consistently discussed economic conditions in relation to the implementation of Tanzania's national inclusive education policy. This occurred at two levels. One is the level of the national government in terms of the amount of the budget that is allocated to inclusive education implementation efforts and the other is the familial level in terms of how economic constraints of families with children with disabilities influence their decisions about which children to send to school. Both will be explained below.

Government budget allocation. Displeasure about the allocation of government funds to inclusive education efforts was frequently mentioned during interviews. For example, an NGO representative told me quite simply, *"This inclusive education is not a government funded project."* Further insight into the implications of government budget allocation for inclusive education is provided by the following quotation from a different NGO representative in response to my question asking if inclusive education is a priority of the government:

> *It's not, it's really isn't. I would love to say it is because I know that there is a lot of people in government who care about inclusive education, and who wants to see, to see us have schools that are really equipping the population as diverse as it is, as diverse as the need of the learners are. But the reality is, uh we are not putting our money towards these things. And so we will continue to talk but if we don't change the way we think about how we spend our money then it will just be talk. And it will just be a nice declaration on paper that is not being practically implemented.*

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From her point of view, the National Strategy on Inclusive Education 2009-2017 is limited to policy rhetoric because the government is not allocating funds towards implementation.

It is important to highlight that participant comments about the government budget allocation to inclusive education seemed to be closely tied to their perceptions about political will. This connection can be seen in the following comment by a government official: *"When there is no political will it's clear that inclusive education cannot be implemented successfully because inclusive education it's expensive! Now restructuring, which means needs resources and the resources depend on the political will."* In terms of political will this particular government official housed in the special education unit seemed to be referring to the political will of other sections of the MoEVT outside of special education, thereby attributing limited implementation to the more general lack of political will and the resultant lack of government funding. This may speak to the hierarchical position of special education in the MoEVT by implying that special education officials feel beholden to other ministerial units or departments, particularly in relation to funding. Further insight into the hierarchical nature of the lack of political will and funding at upper government levels is provided by the following comment the government official made later in our conversation:

> *Even the National Assembly…Some of the members of parliament, some they are not aware. When you talk about people with deaf-blindness, they don't know what is deaf-blindness. They haven't seen them. When you tell them, maybe okay we need enough funds to buy machine for visual impairment, some of them they don't see the importance of allocating enough funds for that…because we always say in order for inclusive education to be effective we need to a political will. It's very important because they are those who are dealing with allocation of funds and whatever. But without political will*

nothing will be implemented. Because resources will be not or enough funds will be not allocated for that.

An additional example linking government budget allocation to the lack of political will or commitment is provided by this quotation from an NGO representative:

If I have told the government would have paid enough resources to invest in the real inclusive education is where now we can say that we are now doing the inclusive education system. Apart from that we will be having good policies, strategies, but no effective implementation and now there are only three years remained for the strategy to expire. Yeah (laughing) *it means we will do the vision but looking in background for the nine years not something have been committed. So the commitment to government inclusive system, it is very little. Because that commitment with allocating resources, that commitment they will change the system of preparing the teachers, that commitment they will raise awareness to the community, for that commitment they will have to pay enough resources to buy the learning assistive devices. That's what I can say.*

Overall, participants from NGOs and the government itself seem displeased by the lack of funding allocated to inclusive education by the Tanzanian government. Perspectives about government budget allocation appeared to be closely linked with those about political will. Specifically, the lack of budget allocation to inclusive education implementation by the government was seen as evidence of the government's lack of political will towards inclusive education.

Familial economic constraints. Although less common than comments about the lack of government funding for inclusive education, some participants mentioned familial economic constraints as another local economic factor that is related to inclusive education

implementation. This factor appeared during discussions about parents of children with

disabilities. More specifically, how their familial economic constraints influenced their

decisions about sending their child with a disability to school. One NGO representative

explained:

> *In a family that is not well off, well off to do, and when they have a choice who to go to*
>
> *school because of the financial constraints, who do they choose? They wouldn't choose*
>
> *that the one who is disabled. They will choose the normal one to go to school; the*
>
> *disabled one can stay at home. Yeah, you see? And then even when they are children*
>
> *disability they need the support to go to school. Like wheelchairs to support, because the*
>
> *parent will carry the child to school every day. But he has, she has also to go to farm*
>
> *and come back collect this child from the school is tiring. I am sure not many parents*
>
> *will volunteer for that for the whole period of schooling of the child.*

Likewise, another NGO representative expressed his opinion that, *"Most of them* [parents]

actually they see if you are spending money to educate your child with disability you lose, you

are not investing, you are just wasting your time and resources."

These examples suggest that parents may not see adequate economic value in educating

their child with a disability. That is, the rate of return for educating a child with a disability may

not be worth the cost of sending the child to school (e.g., school fees, school uniform expenses)

and the lost cost of time working in the fields spent transporting the child to school. The

economic constraints that many parents face in the developing context of Tanzania likely have a

negative impact on inclusive education policy implementation.

RQ1a. Barriers to Policy Implementation Experienced by Local Actors. Local actors

reported a long list of barriers that hinder inclusive education policy implementation in Tanzania.

The most recurrent barriers identified by participants are attitudes, funding and availability of resources, physical barriers, and teachers. These barriers focus more at the school level compared to the broader socio-cultural, political, and economic factors discussed above. However, notable connections to the larger metanarrative of local factors exist and will be highlighted in the subsequent discussion of each local barrier to policy implementation.

Attitudes. In line with the general stigmatizing socio-cultural attitudes towards disability discussed above, negative attitudes towards educating children with disabilities were frequently mentioned as a primary barrier to inclusive education implementation. Participants shared with me that the majority of community members, parents, school administrators, teachers, and students believe that children with disabilities are just "useless kids" who do not need an education. Commonly unquestioned assumptions or myths regarding the dissociation between disability and education were stated in multiple ways across participants such as, *"A disabled child cannot get education"* or *"A disabled child cannot learn"* or *"People with disability have nothing to do with education."*

These types of unhelpful attitudes seem to be related to a lack of understanding or knowledge about disability and education. The following excerpt from an NGO representative about parent and community perceptions reflects such nuances:

> *They see their children cannot see, they cannot hear correctly and then they imagine okay, how is he going to get the knowledge? They are not allowed to access, when you talk of education the community have barrier completely they feel they can't. That thinking that they can't is what, is the biggest challenge.*

Furthermore, numerous individuals told me that although people do not like to openly talk about it, it is common for parents to hide their children with disabilities at home instead of bringing them to school. An NGO representative explained:

There are many, there many children who don't attend to school because parents or guardians sometime they don't have capacity to enroll their children. Sometime parents they don't have full knowledge. Sometime parents they don't know contacts of where they can enroll their children for getting education. Yeah, sometime social problems when a man marry and have a baby who is disability a dad can leave, without providing any support to his children! The society at large can discriminate this woman. Yeah relatives also can discriminate these woman. Maybe also you can find a woman cannot allow that child to go outside playing with others. Because the public also does not accept that kind of disability. That's why you can find difficult time when you visit those homes you will find children staying and playing at home, not allowed to go outside. That's why if you go to schools you cannot find disabled children, you will find non-disabled only. That's why, because their parents hide their children. They are fearing people can laugh, the people can discriminate them.

Once again, this quotation reflects the nuances involved regarding cultural attitudes and beliefs about disability and education. Lack of information or knowledge about how to enroll a child with a disability in school, lack of social support, public shame and discrimination all seem to contribute to the act of keeping children at home instead of enrolling them in school.

In regards to attitudes about inclusive education specifically, complimentary to the beliefs that children with disabilities should not attend school and should be hidden at home is the feeling that children with disabilities should not "mix" or be included with those without

disabilities in a local community school. This is reflected by the rationale that an NGO

representative described as: *"a regular teacher is meant for regular people."* In other words,

children with disabilities are discriminated against as outsiders who do not belong in "regular"

schools with "regular" teachers and "regular" students. Such discrimination is evident in the

story another NGO representative shared with me that, *"If you take someone* [with a disability]

and bringing to the class all the student will run away. Even the teachers will think you are

cursed, ah!"

Again, lack of community awareness and information likely plays a role in perpetuating

these types of attitudes. An NGO staff member provides additional details concerning attitudes

about inclusion and mixing students with and without disabilities:

The problem is that the community do not know that there is such a thing [inclusion]*, I*

can say. So they don't bring their kids to these schools. They still have the mind that

these children, student with disability should have their own schools, should have their

own classes, should have their own teachers. These mindset are both at the government

level and the society level. So when you ask someone from the society that you can mix

together the persons with disability with normal students in the same classes, first of all

they wouldn't believe you. So community awareness is very much needed.

While attitudes undoubtedly pose a significant barrier to inclusive education from the

perspective of the policy actors I interviewed, fortunately I also learned about ongoing advocacy

efforts that many NGOs whom I interfaced with were pursuing. Community awareness and

education were a central advocacy focus. For instance, one NGO representative told me about a

recent public rally they held:

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Go to Tanga to sensitize communities of the importance of educating children with disability, and it worked! So we had, we had rallies, we had posters like that one. And then flags and t-shirts and, you know, things like that, that have also advocacy massages. We have banners, small ones, big ones advocating for inclusive education and right of education to children with disabilities.

A sample flag and poster from this rally are pictured below in Figure 3.6.

Figure 3.6. Sample inclusive education advocacy materials.

The Kiswahili on the flag translates to English as, "Equal rights. Equal opportunities. Education for children with disabilities." The translations of the captions on the poster in the boxes from left to right, top to bottom are: "You have chosen to be a prefect head!" and "Yes, mother, students with disabilities have capabilities, take us to school" in box 1, "Together with others this one is disabled. I want him to study in a common school with others who are not disabled" and

"Okay" in box 2, "Talents of students with disabilities because even we can" in box 3, "Let's ensure this budget makes mention of students with disabilities" in box 4, "I like to study because our school has a friendly environment" in box 5, "I wish to go to school but there are no toilets for the disabled" in box 6, and "Children with disabilities need better teachers" in box 7.

I was told numerous success stories that were spurred by these particular advocacy efforts. For example, a school that was visited during the awareness campaign started a sign language club. The club enabled the peers of a student who had a hearing impairment to learn sign language themselves so that they could help their colleague understand classroom lessons. Another example is a community member who volunteered to pay for the school fees of a blind form four student who could not continue his education because his parents were unable to pay the last installment of his school fees. The student's story was publicized by the media during the campaign and the NGO representative explained, *"Because of our advocacy…somebody just volunteered, 'I will pay for his fees. Let him go and get his results!'"* A final example is of a local cement business who donated beds and mattresses to a school for children with disabilities that had poorly equipped dormitories. Together, these success stories illustrate the positive impact that local advocacy efforts can have on community attitudes and support for the education of students with disabilities. Increased awareness and knowledge can produce powerful changes.

In sum, people seem to have uninformed and unhelpful attitudes about why and how students with disabilities should be educated instead of being hidden at home, as well as why and how they should be mixed or included with students without disabilities. Community awareness campaigns like the one highlighted here are working to change the types of attitudes that are serving as barriers to inclusive education implementation in Tanzania.

Funding and availability of resources. Similar to the more general economic conditions discussed above, a major constraint experienced by local actors is serious shortages of resources. Participants frequently remarked how expensive inclusive education is and that schools do not have the necessary resources to support the learning of students with disabilities. Special learning materials mentioned by participants included eye glasses, magnifying glasses, books with large print, braille machines and books, wheelchairs, and sunscreen to protect the skin of children with albinism.

The negative impact that such lack of resources can have on learning is shown in the following scenario provided by a government official:

> *Now that is where we get the point of resources. Sometime you can send, you can send*
>
> *for example the visually impaired pupils, you send them to school, but there is no*
>
> *resources. There is no braille machine for them, which means you are dumping them but*
>
> *they are not learning. Send them to school and achieve - that is the target.*

So, the lack of resources seems to create the unfortunate situation where children with disabilities are physically "dumped" in schools but they do not have the necessary materials or supports to facilitate learning. In discussions with other participants I learned that these children frequently drop out or fail out of school, suggesting that inclusive education is not sustainable without the necessary supports in place in the classroom.

An important factor in the Tanzanian context when discussing resources is not only the lack of funds to purchase learning materials (which in and of itself is indeed a major barrier), but also the limited availability of these materials in the local market. I was told stories about how different materials such as sunscreen are simply not sold in stores due to a lack of local demand, even in the urban center of Dar es Salaam. The NGOs focused on albinism reported that they

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depend on sunscreen donations from Europe and North America because the vast majority of Tanzanians have dark skin and do not use sunscreen. Another example from an NGO representative illustrates this supply and demand relationship for materials for students with visual impairment:

> *For lens, or magnifiers or monoculars, like that, so there was no demand. Means if there is no demand there is no supply for that equipments. So you not find them to be sold in the shop. If you give me money and say okay you can have these to purchase one hundred piece of magnifiers I will struggle to get them.*

Thus, the issue of inadequate resources for inclusion is more nuanced than merely having the necessary funds to purchase special learning materials and equipment. The unavailability of these specialized materials in the local market is a significant challenge to overcome to promote the learning of children with disabilities.

Physical barriers. Another barrier to inclusive education that was consistently mentioned by local actors was that the school environment is not "friendly" to children with disabilities. Across interviews, I came to learn that participants used the term "unfriendly environment" to refer to the fact that school infrastructure was physically inaccessible to many learners, especially to those with physical disabilities. Environmental barriers mentioned by participants included: doors, passageways, stairs, and toilets. The following quotation from a government official explains how stairs act as a physical barrier for learners with disabilities:

> *You can see that we have a lot of upstairs in schools. You can imagine people with wheelchairs, how can he manage to use upstairs? Even those with visual* [impairments]*, although they have that stick* [white cane] *eee! But if the environment are friendly to all,*

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students will be willingly to go to school. Even parents will be willing to send their children to school.

Another example about the unavailability of accessible toilets is provided by a faculty member. Here, she is telling a story about a conversation that she had with a girl with a physical disability who used a wheelchair:

I talked with her and she said, "When I leave home in the morning I don't take breakfast." I said, "Why don't you take breakfast?" She said, "I don't take breakfast because if feel like going to the toilet I can't go to the school toilet. So when I go home it's when I start eating in this afternoon." So she remains hungry the whole day because of the toilet. Yeah, there are a lot of sad stories.

Together, these examples illustrate how school infrastructure serves as a physical barrier to including students with disabilities in their local community schools.

Similar to the preceding barrier of funding and availability of resources, physical barriers are also connected to the broader theme of economic conditions. Funding is required to modify the physical infrastructure of existing schools to make the environment friendlier to students with disabilities, as well as build new schools that are designed to be physically accessible.

Teachers. Finally, teachers' abilities and attitudes were also frequently mentioned as barriers to inclusive education in Tanzania. As members of the greater community, the negative cultural attitudes towards disability and inclusive education explained above are often held by teachers as well. Similar to the earlier discussion of negative cultural attitudes towards disability and inclusive education, negative attitudes and a lack of knowledge seem to go hand in hand. I was told that teachers feel they do not have the sufficient knowledge or training to support students with disabilities in their classrooms. This can be seen in the following statement where

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an NGO representative sympathized with teachers, saying that, "*It is difficult for teachers. Even teachers themselves would not feel that they are able to handle a class with mixed kind of learners*."

The lack of teacher training and the consequences for the inclusion of students with disabilities is further explained by another NGO representative:

> *Teachers which are really competent in education, I mean in special education, there are very, very few. And you find sometime in one school: one, two teachers and sometime zero. And we say this school is now taking, opting inclusive education. To us we think some of the children, especially people with disabilities, the deaf, they just visiting the school. At the end of the day they find they are gaining nothing.*

This notion of children with disabilities just visiting school but not learning due to inadequate teacher preparation came up in many interviews. Another NGO representative describes the problem as, *"Many of the schools they lack special education teachers. So you find children many are there as routine, that they are there but they are not benefiting really."*

To adequately prepare teachers to support the learning of students with disabilities, participants alluded to the fact that teacher training for inclusive education must be designed to meet the unique instructional needs associated with different types of disabilities. For example, an NGO representative highlighted the following knowledge gaps pertaining to students who are hearing, visually, and cognitively impaired, respectively: *"Teachers should also know about the hearing aid, should know about the white cane, they should also know the things that will enable a child who is mentally disturbed."* Likewise, to address the communication needs of students with visual and hearing impairments, the importance of training teachers in Braille and sign language was also consistently expressed. The recalled dialogue between a government official

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whom I interviewed and the head of a secondary school in Njombe artfully illustrates the need to train teachers to communicate with students with disabilities to foster their learning:

> *I remember when I met the head of secondary school he said that, "Those students they don't want to study, those with hearing impairment." I asked, "Why?"* [The head of the school said] *"Because what we are trying to give them, to teach them, they don't understand." I asked them, "Do you have any teacher within your school who is capable or expert of sign language?" He said, "No, no." So how can those hearing impairment learn when there is no expert of sign language? It becomes a problem because no one can sign for them…of course they are not learning, they are dumped. The most* [important] *issue is to make sure that those students who are sent to school they are able to achieve.*

In terms of connections to the larger metanarrative, teacher training overlaps with the broader economic and political themes. The development and maintenance of teacher training programs carry a considerable expense, thereby requiring a political commitment and investment in human capital and infrastructure. Through my field experience I learned that there is currently only one special education teacher training college in Tanzania, which is not enough to meet the needs of inclusive education. Inadequate teacher training is clearly a barrier that needs to be overcome for inclusive education implementation in Tanzania.

RQ2. Global Influence on Inclusive Education Policy Appropriation

Two key themes emerged in my data with respect to my second research question focused on global influences on inclusive education policy appropriation in Tanzania. These include global funding and doctrine, each of which will be elaborated upon below.

Funding. Not surprisingly, when I asked participants about global influences on the creation and implementation of the National Strategy on Inclusive Education 2009-2017, donor funding was prominently featured in our discussions. The degree to which global donors seemed to influence both policy formation and policy implementation was quite marked. In terms of inclusive education policy formation, I was told by government and NGO representatives alike that Nordic countries funded the entire process. For instance, one NGO staff member said boldly, "*I can say with wide mouth that the question of inclusive education is coming from outside. I think was it Sweden or Denmark which have funded the project of inclusive education in the Ministry of Education.*" Another NGO representative corroborated, "*It's Finland that funded the process.*"

A similar story was told when discussing the role of international donors in inclusive education policy implementation. An NGO representative openly shared that, "*All the project that we have been implementing they have been funded by external donors.*" Large development agencies like UNICEF and UNESCO were frequently mentioned as sources of funding for various inclusive education projects and initiatives that have been carried out by the government and NGOs. For example, when describing recent and ongoing intervention efforts, a government official told me:

> *We have been cooperating with UNESCO, UNICEF on issues of establishing assessment centers…And then for example last year we inaugurate the guide for people with albinism, we get the funds from UNICEF and then we prepare the guides for that.*

It is important to draw attention to the tone of these types of comments. Across my interviews, discussions about funding felt very matter-of-fact and seemed to reflect a sense of fatalism concerning external funding. For instance, the blatancy of the seemingly inevitable

reality that inclusive education implementation is funded from abroad is conveyed by the next

quotation. When asked about the funding sources of the projects a particular NGO was pursuing,

the representative responded, "*From Washington again* (laughing)". Based on the tone and

brevity of responses such as this, I got the impression that the answers to my questions about

funding sources seemed obvious to my participants; there was almost a sense of confusion as to

why I was asking such an outrageously self-evident question. Furthermore, the preceding

comment alludes to the fact that Tanzania has a historical pattern of relying on donor funds for

development, and inclusive education appears to be no exception. In sum, the link between

global funding and inclusive education policy appropriation in Tanzania was extremely

pervasive.

Global doctrine. In addition to funding, another global influence on inclusive education

policy appropriation in Tanzania is what I am calling global doctrine, or the global policy

documents that promote the rights of children with disabilities and inclusive education. The

main documents were reviewed earlier when presenting the global inclusive education policy

landscape to contextualize this study. Numerous participants directly referred to many of these

global documents when discussing what triggered inclusive education in Tanzania, most notably

the Salamanca Statement, Education for All, and the UN Convention on the Rights of Persons

with Disabilities (CRPD). These three documents and their collective influence on inclusive

education in Tanzania are reflected in the following quotation from an NGO representative:

> *The international* [community] *is speaking of the implementation of Salamanca*
>
> *whatever…education for all…Our country having signed that one, having ratified those*
>
> *kind of documents, the UN documents…even the optional protocol was also signed. So*
>
> *that one becomes legal kind of document, it has now to make sure that the country itself*

has now to make sure that the different provisions have to be putted in action and one of

that is to make sure that inclusive education is there. I think it has a direct impact

because we have agreed as UN member state. So you cannot deny something which you

have already ratified.

The global doctrine of inclusive education appeared to carry a lot of weight in the eyes of the individuals whom I spoke with, including members of the government. Further evidence of the influence of global doctrine can be seen in the subsequent quotation from a government official. In this part of our conversation he is openly telling me that portions of text in the National Strategy on Inclusive Education 2009-2017 were directly taken from global documents like the UN CRPD and the Salamanca Statement:

Some have been taken direct as it is from those documents so that it can be implemented

in Tanzania. Yeah, some of them we decided to adopt direct from those are because

Tanzania is one of the signatory of those documents.

From the perspective of the individuals I interviewed, and as can be seen in both of the previous quotations, there seems to be a shared perspective that Tanzania's signature on these documents holds the nation accountable to fulfill its contractual agreement to inclusive education. In addition to the pressure that global doctrine creates for Tanzania as a signatory to uphold their commitment to inclusive education, it also seems to significantly shape the dialogue of inclusive education in Tanzania because the doctrine's direct influence is manifested in the nation's official policy rhetoric.

RQ3. Local and Global Intersection and Divergence

The various local and global factors explored thus far do not operate in isolation. In an attempt to point out specific local and global influences, divisions were made above, but in

reality all of these factors interact with one another in complex ways throughout the policy process. This section highlights some key instances where the local and the global intersect and diverge.

      Intersection. Two points of intersection between global and local factors appear to play a major role in the appropriation of inclusive education in Tanzania. These include the intersection between global documents and local needs and the intersection between global funding priorities and local reliance on donor funds.

      Global documents intersect with local needs. Building upon the previous discussion about the influence of global doctrine on inclusive education taking hold in Tanzania, most participants perceived a meaningful overlap between local needs and the global documents. In other words, global documents were perceived as complimenting local needs concerning disability that have long existed in Tanzania. I got the sense that some individuals were quite adamant that I understand this connection and do not misrepresent Tanzania's adoption of global documents as a unidirectional transaction. For example, one NGO representative stressed that:

> *It doesn't start from somewhere outside; please now help me to establish disability*
>
> *policy, no! The needs start from inside - within you, your community, your people, your*
>
> *country realize that there is a need for it. If yes, then you plan for it. If there no*
>
> *realization of the need it will not happen. The UN declarations help start with knowledge*
>
> *which opens up the mind. So the biggest push I would say starts inside. But then it's*
>
> *supported by those international instruments. So you could see it is the need, it is the link*
>
> *between the two layers.*

He went on to explain that children with disabilities need a lot of support to go to school in Tanzania and this has been a challenge for many years. This example serves to illustrate the link

between the needs of Tanzanian children and the responsiveness of the global documents to those local needs.

It is important to point out that this perspective of global documents complimenting local needs differs somewhat from the argument advocated above that global doctrine as an outside force impacts local inclusive education policy appropriation. In this instance, more agency is afforded to local policy actors compared to the former positioning of local policy actors as somewhat submissive signatories that bear the responsibility to uphold their commitment to inclusive education. Such agency is evident in how the global documents are used as a tool by local policy actors to promote their local needs. Global inclusive education documents were frequently referred to by participants as "tools" or "instruments," as can be seen in the above quotation. Additionally, another NGO representative explains how his organization uses a Kiswahili version of the UN CRPD when advocating for the rights of children with disabilities to the government:

> *When we argue, when we talk with government, when we send our reports, when we demand something we refer to that document. And so long it is the document acceptable within the country they agree. They agree, so to say it has some impact.*

Examples such as these illustrate how local policy actors are skillfully using global documents as an advocacy tool in an effort to meet their local needs. Such actions are made possible due to the complimentary nature of the global documents to local needs concerning disability.

Global funding priority area intersects with local reliance on donor funds. A second intersection between the global and the local in relation to inclusive education policy appropriation in Tanzania is the connection between inclusive education as a priority funding area for global donors and Tanzania's dependence on donor funds for national education

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development. Participants recognize that the presence of inclusive education on the international

development agenda has financial implications for global investment and aid in developing

countries like Tanzania. Given the economic realities of the Tanzanian context, local policy

actors are quite reliant on donor funding and the case of inclusive education is no exception.

Individuals from the government and from NGOs frequently spoke about the willingness of

global donors to support or fund inclusive education in a very positive light. For example, an

NGO representative explained how global attention to and support of inclusive education has

helped their initiatives:

> *And the, the, I mean the inclusion of person disability in the development process being*
> *one of the international agenda. Yeah, has helped a lot for us to say okay, Tanzania is*
> *not an island playing our own song – we have to play to the music of the world. So that*
> *also to our intervention but also availability of donors who are ready and, you know,*
> *willing to support, you know, our initiatives of promoting uh inclusive education.*

Similarly, a government official explained how international aid from organizations like

UNICEF and UNESCO helped address their need for resources:

> *UNICEF and UNESCO in most cases they help us to implement our plans that is due to*
> *that, sometime we don't have enough resources. And when we are stacked we tend to ask*
> *them for assistance, especially for resources. For example even these documents was*
> *printed by UNESCO themselves…Even the fund for training was from UNESCO.*

Global financial support has been instrumental in advancing inclusive education in Tanzania.

The influence of international funding on inclusive education would not be as great if there was

not such a great need for resources in Tanzania and if inclusive education was not a priority

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funding area on the international development agenda; the global and local forces intersect and work in tandem.

  Divergence. When examining the interplay between global and local forces in the appropriation of inclusive education in Tanzania, there were not only points of intersection like those discussed above, but there were also points of divergence. The most notable instance where the global and the local diverged was in terms of attitudes about disability and inclusive education. The negative cultural attitudes towards disability discussed previously for Research Question 1 can be juxtaposed against broader global beliefs about the rights of people with disabilities. A government official eloquently describes the stark contrast between global and local perspectives from her point of view:

> *You see like, like here they had one myth that a person with disability is a poor person. A person with disability cannot learn. A person with disability cannot marry. A person with disability have no right to vote. And if you kill him or her you are going to be rich – like those are local ideas. Like, or if it's others they say if you will educate him God will bless you, because they base on myth. Faith, you know. If I educate this person with disability maybe God will bless me. But it's right, it's her right or his right to take. But global, global means it's international. Things are clear, are open, and are in scientific way. They see person with disability is like other person. And they need to get all rights to have a sex, to get married, to study, to acquire education, everything. Local is local my dear!* (laughing)

This participant associates local perspectives about disability with myth, religion, and tradition, while she associates global perspectives with science. Interpreting this scientific versus non-scientific distinction one step further, this may suggest an implicit association between the global

with modernity and the local with traditionalism. Additionally, global perspectives are described as clear and open, implying that local beliefs are more complicated and perhaps obscured. Such divergent perspectives about disability and in turn inclusive education are important to consider when diving deeper into specific instances of local resistance, adaptation, and subterfuge in the next subsection.

      RQ3a. Local Resistance, Adaptation and Subterfuge. Instances of local resistance, adaptation, and subterfuge emerged from my data when looking more broadly for cases of divergence between global and local forces. In addition to divergence in a broad sense between global and local attitudes towards disability and inclusion aforementioned, the ways that local policy actors have actively resisted inclusive education, have adapted inclusive education to fit the Tanzanian context, and have skillfully navigated the inclusive education policy process to reach their own objectives presented themselves as additional examples of divergence in more a more subtle manner. Examples of local resistance, adaptation, and subterfuge are presented below.

      Resistance. On the surface it appeared that all participants supported the global notion to include all students with disabilities, but when probing deeper I discovered evidence of some dissenting voices that are resisting inclusive education. Local disagreement about inclusive education as the most appropriate means to educate children with disabilities seemed to be a point of contention. For example, an NGO representative disclosed that Tanzanians, "*Are accepting, some are like resistance some, some, but, you know, the government people so is not like hundred percent.*" Another NGO representative gave the following example of dissenting voices when discussing areas of local conflict concerning inclusive education: "*I think, for people with disability, they say, 'No inclusive education is not good.'*"

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Differing opinions on the matter seemed to be especially pronounced among various disability groups. Multiple participants from the government and from NGOs told me about the general trend that a subset of the disabled community feels that children with severe disabilities should be educated separately in special schools or units, while children with mild disabilities can be included in regular schools. For example, a blind individual told me that the blind community feels that they need special schools or units to be taught braille, which is not feasible in an inclusive classroom. Consequently, the position advocated by the blind community according to the NGO representative I spoke with is that inclusive education may be possible in upper educational levels, but not in lower primary:

> *Especially at early level like primary one or two…So with lower classless, we do not believe in inclusive education. Because of the braille language we think if the children does not get the required support for them to learn braille, good braille, have command in braille, and then that is going to deny them opportunity to participate fully in the process of acquiring education in higher levels.*

I learned that these types of concerns have been voiced during the collaborative stakeholder policy formation meetings explained above when discussing the political context. Using platforms such as these meetings, some disability groups seem to have the reputation among the DPO community of trying to dissuade the government from adopting the more holistic global vision of inclusive education. Putting restrictions on who can be included and at what point in their education they can be included runs counter to global doctrine which advocates for the inclusion of all children at all stages of their education. Such disagreement or lack of consensus about inclusive education can create challenges for implementation, as reflected by the following quotation from an NGO representative:

The other barrier, the other barrier is about to these other NGOs, disabled peoples

organizations of which they do not support inclusive education totally. Now for them if

they continue to preach that inclusive education is not favorable, if they continue to do so

and therefore the government will have a lot of challenges because it will continue to

preach the good of inclusive education and then there are people who are going to

oppose that one. So, to me I think that is a challenge because the government and the

civil society have to speak the same thing for the changes to happen.

Overall, partial support for inclusion and active resistance by some disability groups illustrate divergence from the global; the local understanding and promotion of inclusive education for some runs counter to the global philosophy of inclusive education for all.

Adaptation. When discussing the relationship between global and local forces, participants seemed to recognize the need to adapt or localize inclusive education to the Tanzanian context. For instance, a faculty member explained that to make inclusive education more locally relevant:

We can say, okay, our education is responsive to all. When we are saying responsive to

all we have to define which type of society are we having? There are the disconnecting,

things that are disconnecting, is actually differences between countries: differences of

economic status, differences in terms of culture, also cultural differences, differences in

terms of connectivity when you are talking of electricity, differences about social

responsibilities. These are the differences that come to make inclusive education to all.

All of these differences are important to consider when developing and implementing an inclusive education policy in a given context.

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While there were many instances similar to the preceding quotation where my participants and I discussed the importance of adapting global policy to the local context in a broad or abstract sense, it was difficult to attain concrete examples of local adaptations. For instance, one NGO representative viewed the National Strategy on Inclusive Education 2009-2017 document itself as evidence of local adaptation:

It was a pressure from outside and we said is worth having it and we, and try to localize it so it fits to our environment because now we have developed our own national strategy. So we are not implementing international one but our own national inclusive education strategy with a lot of ideas borrowing from the international strategy.

When asked about specific examples of how the national strategy diverges from global policy documents, the conversation continued to stay at the abstract level as he discussed local "approaches" in a broad sense. Likewise, another NGO representative cited the inclusion of in-country budget details in the National Strategy on Inclusive Education 2009-2017 as an example of local adaptation.

A final example comes from an interview with a government official where we discussed his work developing new inclusive education training booklets for teachers in collaboration with UNESCO. He explained that the documents were originally developed for Asian and Pacific countries but changes were made to contextualize it to the Tanzanian context. When I asked about specific changes that were made, he mentioned cultural and language issues in case studies:

Uh we tried to check with case studies which we have been using in the, which have been using in the former document. We changed it, we changed those cases, those case studies so that it can suit within our environment. And even those issues we thought that it is not

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applicable in Tanzania we decided to change them, to delete them so that we

accommodate all context that we see that it suitable for Tanzanian environments…the

language for the Islamic language which have been used in that book we decided to skip

them. And also there some, also traditions issues for Asia or some cultural issues of

Asian we decided to abandon them.

Based on these types of comments, there appears to be limited local adaptation in Tanzania's inclusive education policy documents overall.

Subterfuge. A final way that divergence between the global and the local was seen is through subterfuge. In my assessment of the data, to an extent I feel that inclusive education was adopted in Tanzania to meet the complimentary yet distinct objectives of getting international aid and investing in education generally. Each of these objectives is discussed below.

To a degree, inclusive education is perceived as a point of access to donor funds. As explained previously, the local actors I interviewed recognized that inclusive education is on the international agenda and as a result is tied to money from external sources. In the context of the nation's low economic status and dependency on international aid, it seems that one motivation behind Tanzania's embracement of inclusive education is financial in nature. To explain, it seems that Tanzania adopted inclusive education almost out of fear that donor funds would be withdrawn if they resisted inclusive education as a policy initiative. For example when discussing global donors in relation to inclusive education, a government official openly admitted, "*We need to do what they say…we do not want to make them angry.*"

Additional evidence of this fear and its rationale is illustrated in the following excerpts from an interview with an NGO representative. When talking about Tanzania's adoption of inclusive education, I was told:

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In Tanzania creating polices and ratify is very simple. We are good at that, very simple. But now, you know, Tanzania is very much worried with anything that will impact from the international arena. Most of the things which come from the international arena are being ratified very quickly: protocols, conventions, you know.

When I asked why, he explained:

Most of our budget comes from outside, from outside organizations. So they are worried to create any, any bad relationship with the international because we are mostly depending on them, investors from outside. More of our budget, almost half of our budget are coming from European countries, American countries, so and so on. Tanzania is very much worried about anything that will defend their status, that are the international arena. So most of the lobbying from outside will work in Tanzania. When they are told, "Do this" from outside they will quickly do it.

Based on this portion of our discussion, I got the sense that Tanzania adopted inclusive education from a policy standpoint quite quickly in large part due to a fear of creating poor international relations which would in turn impact external funding.

The power of donor funds to shape inclusive education policy in Tanzania is further illustrated by the following comment from an NGO representative, "*Donor, the donors, development partners, you know? They have come with that song so we have to sing it* (laughing)". This suggests that Tanzania is singing along or going along with the priorities of the donors to ensure that financial aid continues. Currently, inclusive education is the song that policy actors in Tanzania feel that they need to sing along with. Put another way, a different NGO representative sees the financial utility of joining the global inclusive education movement by referring to inclusive education as a "*good machinist for the sake of the donors.*" Here,

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inclusive education is viewed as a machine operating within the larger apparatus of educational development that facilitates the transfer of funds. These comments bring into question the possibility that if the donors come with a new song or a new machine (i.e., a new educational development priority), then local policy actors will shift gears so to speak and transition to the next funding priority.

In a related vein, inclusive education was perceived as a way to support educational development in general. This distinction is nuanced and can be seen in an NGO representative's response to what triggered inclusive education in Tanzania: "*One is for demand, demand for inclusive, no, demand for education. Not for inclusive.*" I found it interesting that this participant corrected himself. His self-correction conveys the subtle distinction that the local demand for education on the whole is greater than the demand for inclusive education specifically.

This point became clearer after interviewing additional participants who expressed the need for their nation to improve its education system overall as a central concern. To illustrate, an NGO representative explains the local demand for education as:

> *For us we think because we have hunger with education. We do not have enough*
>
> *opportunity for everybody to get education, in the right way, at the right time. Now there*
>
> *are people who come to say they have the way how to make it happen.*

This participant perceives inclusive education as one potential solution from outside people to meet Tanzania's hunger for education. Similarly, another NGO representative disclosed:

> *Of course it started with, we borrowed this idea from foreigners, especially from Europe,*
>
> *Westerners, Europe. Whenever any partner would accept funding us, the thing that will*

ask is that we are funding education. But how do you think of this idea of inclusive

education? So there was some sort of influence from outside.

The two preceding quotations suggest that the idea of inclusive education has been suggested or imposed by global forces as a way to improve education in Tanzania. Put another way in a metaphorical sense, inclusive education can be viewed as an international prescription to remedy Tanzania's educational ills. Local actors want to improve education on the whole and outside global actors are prescribing inclusive education as the solution. Local actors are eager for assistance with educational development, so accept the course of treatment.

When considering subterfuge on the whole, inclusive education appears to be a means to two ends. The first is as a means to securing international funding. The second is as a means to promote educational development. There are undoubtedly multiple motivations in play. Aside from the more obvious goal of providing children with disabilities with an education, these are two additional objectives that also seem to be underpinning inclusive education policy appropriation in Tanzania.

Discussion

The findings of this study suggest that the case of inclusive education is somewhat consistent with Tanzania's general historical trend of adopting policies from the global North/West and relying on external funding (Samoff, 1994; Vavrus, 2003). The asymmetrical power relations that characterize global policy transference between developed and developing countries (Anderson-Levitt & Alimasi, 2001; Ginsburg et al., 1991; Steiner-Khamsi, 2010) are no doubt evident in the present study, as global funding and global doctrine seemed to directly influence inclusive education policy appropriation. However, the findings concerning the influence of multiple local factors and their intersection and divergence with global factors

complicates the notion that the global diffusion of educational ideals flows in a unidirectional fashion from the global North/West to the global South/East (Anderson-Levitt & Alimasi, 2001; Steiner-Khamsi, 2010).

In terms of the multiple local socio-cultural, political, and economic factors that emerged from the data, Tanzania's low-income economy status (World Bank, 2013) definitely seemed to play a role in hampering inclusive education policy appropriation through government budget and familial economic constraints. Socio-cultural beliefs about disability and their ties to social stigma and discrimination also featured prominently in interviews, particularly concerning albinism. It is worth noting that although it did not come up in my interviews, other anthropological literature points to additional sociocultural, historical and economic factors that impact what was communicated to me as discriminatory attitudes and practices associated with albino killings. For example, rapid economic and social change fostered by structural adjustment and economic liberalization has been connected to the efforts of miners and fisherman in Northwest Tanzania to secure lucky albino charms from healers for finding minerals or fish (Bryceson, Jønsson, & Sherrington, 2010; Schühle, 2013; Tanner, 2010), thereby illustrating the multifaceted nature of these beliefs and practices. I want to assert that my findings do not support a discourse of primitivism, but attempt to reflect participant perspectives that are temporally and contextually bound.

In terms of political factors, the government's lack of political will was a primary focus in discussions about political influence, which is consistent with previous research on inclusive education in Tanzania (Mkumbo, 2008). Similarly, all barriers to inclusive education that are commonly reported in the literature including physical infrastructure, attitudes, teacher training, and lack of learning materials and resources (Chataika et al., 2012; Eleweke & Rodda, 2002;

Marshall, 1997a, 1997b; Mbwilo et al., 2010; Miles, 2011; Mkumbo, 2008; Mnyani, 2009; Woods, 2008) were found in this study. Together, all of these local influences suggest that inclusive education policy appropriation in Tanzania is not only driven by external global forces. Beyond documenting the presence of these local factors in Tanzania's inclusive education policy process, this study has also generated many nuances in relation to local influences. For example, with regards to the perceived lack of political will on the part of the government to promote inclusive education, the data also revealed a degree of recognition that the government has to address more pressing educational issues like secondary education and teacher absenteeism, which impacts the low prioritization of inclusive education. Additionally, when considering attitudes, the findings of this study suggest that it is important to consider the influence of limited knowledge about disability because negative attitudes and a lack of information seemed to go hand in hand.

Lastly, this study further complicates the notion of global policy transference by illustrating the complex interplay between global and local forces in inclusive education policy appropriation in Tanzania. Points of intersection between the global and the local were present in the data, including the intersection between global documents and local needs and between global funding priorities and local reliance on donor funds. These points of intersection show how global and local forces can work together in tandem to move inclusive education forward. Conversely, points of divergence between the global and the local were also found in the data such as divergent attitudes about disability and inclusive education between global and local levels as well as between different disability groups within Tanzania. Evidence of subterfuge was also found, suggesting that inclusive education may have been strategically adopted as a way to access donor funds or reluctantly accepted as a global prescription to treat Tanzania's

educational ills. These points of resistance and subterfuge demonstrate that global and local

forces can clash and the local adoption of inclusive education may have some strategic motives

beyond supporting the education of students with disabilities.

Limitations and Future Directions

Although this study extends what is known about global and local influences on the

inclusive education policy process in Tanzania, it is important to note a few limitations of this

work that should be addressed by future research. First, the perspectives represented by this

qualitative study are limited to the sample of individuals that I interviewed. My combined

methods of purposive and snowball sampling enabled me to capture a variety of perspectives

across national policy actors working in the education sector, but I did not interview government

officials from all divisions and units of the ministry nor did I interview representatives from all

national and multinational organizations operating in Tanzania. The opinions of national policy

actors not included in my sample may differ from those of my participants, and future research

should extend my work to continue to give voice to additional perspectives. Additionally,

further research exploring the perspectives of the disabled community should consider budgeting

for and providing participants with transportation and interpreter services to accommodate travel

and communication needs. I was unable to interview a representative from one DPO who

requested financial compensation for transportation and an interpreter, and this unfortunate

constraint on participation could be prevented in future research.

Related to my sample characteristics is the limitation of the level of my analysis of

inclusive education policy appropriation in Tanzania. Returning to the theoretical framework

depicted in Figure 3.2, this study was largely limited to the upper sections of the diagram

because national policy actors were interviewed. While some insight into the lower levels of the

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diagram (i.e., implementation at the regional, district, ward, village, and school levels) was discussed to a degree, it is important to recognize that it was from the perspective of high-level policymakers who in most cases are fairly removed from these local contexts. Consequently, future work should more closely analyze policy appropriation at the more micro levels depicted in Figure 3.2 from the perspectives of local policy actors at regional, district, ward, village, and school levels. Doing so may yield additional instances of local adaptation beyond the limited amount that were found here. Research of increasingly more micro levels where practitioners on the ground are confronted with local realities and attitudes deeply imbedded in local contexts might tell a different story.

Another direction for future research is to more closely explore the relationship between ujamaa and inclusive education in Tanzania. Interestingly, Tanzania's political history with African Socialism and ujamaa did not emerge during any of my interviews. This may have been because I did not explicitly ask about ujamaa. Instead, when asking about local factors I intentionally phrased my questions broadly to avoid biasing or guiding participant responses in a given direction. Future research may want to explicitly ask about the connection, or lack thereof, between ujamaa and inclusive education. Alternatively, it is possible that ujamaa was not mentioned by participants because from their perspective this African socialist ideal is not as complimentary to the ideology of inclusive education as one might expect. While previous literature suggests that ujamaa is aligned with inclusive education ideals (Tungaraza, 1994), perhaps the cultural and political spirit of ujamaa creates social division because disability is a social marker of difference (i.e., people with disabilities may not fall within the collective notion of familyhood). Further investigation into this possibility could be helpful for inclusive

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education implementation efforts to determine whether ujamaa might help or hinder cultural understanding of inclusive education policy.

Implications

Despite its limitations, the results of this study are valuable for policy actors in Tanzania and internationally to consider. First, participants listed numerous local barriers that should be addressed as inclusive education implementation in Tanzania continues. Continued advocacy efforts like the public rally discussed above will be important to change negative cultural attitudes towards disability and inclusive education across all levels of society and encourage parents to send their children with disabilities to school. Given the apparent connection between negative attitudes and a lack of understanding, educating the citizenry about disability and providing information about inclusive education can help address the knowledge gap and give parents of children with disabilities more capacity to enroll their children. Additionally, the perceived lack of political will should be addressed through improved government budget allocation to inclusive education by targeting areas such as teacher training, the physical accessibility of school infrastructure, and the availability of teaching and learning resources. Continued and improved collaborating between the government and community stakeholders will also help build a unified inclusive education movement in Tanzania.

Global and local partners should also work together to acknowledge and understand the reasons behind areas of resistance and subterfuge. Failing to do so may threaten the sustainability of current and future inclusive education policy development and implementation. Tanzania, like many other developing nations, has been influenced by and responded to global pressure to adopt inclusive education. To carry inclusive education forward beyond rhetoric, local commitment and investment are invaluable. While seemingly positive advancements in

policy, advocacy, and implementation have been made in Tanzania, it is too early to tell if the current direction that inclusive education policy appropriation is taking will be successful long term. The presence of local resistance may threaten the realization of inclusive education, and perhaps further local adaptation would be useful to reach a more mutually agreeable education development solution. Additionally, while the instances of subterfuge (i.e., using inclusive education as a means to secure international funding or as a means to promote educational development) do not appear to wholly undermine the inclusive agenda at this point, they may threaten the sustained advancement of inclusive education. The longevity of inclusive education reform would be tested for example when global funding priorities shift or the global prescription of educational development changes. Continued advancements in local adaptations could be a promising area of opportunity for global and local partnerships to focus on to prevent the potentially harmful effects of local resistance and subterfuge, thereby promoting sustained inclusive education policy appropriation in Tanzania.

In addition to implications for Tanzania, the findings from this study raise important questions regarding the global spread of inclusive education policy and practice. As inclusive education continues to proliferate across the globe, it will be increasingly important to consider how global and local forces will intersect and diverge as additional developing countries adopt inclusive education. It is vital for international development actors to be attentive to local needs and interests that are shaped by socio-cultural, historical, economic, and political factors to support sustainable inclusive education efforts. Joint efforts between global and local partners should be targeted at addressing local barriers, resistance, and subterfuge. To do so, meaningful local adaptation of the global ideal of inclusion is essential to advance inclusive education reform beyond rhetoric and create long term change.

Conclusion

The primary goal of this study was to examine how global and local forces have shaped inclusive education policy appropriation in Tanzania from the perspectives of national policy actors in the education sector. Semi-structured interviews with 20 policy actors in Dar es Salaam working in the government, non-governmental organizations, and universities revealed how multiple local and global factors have influenced the creation and implementation of the National strategy on Inclusive Education 2009-2017. Key local factors identified by participants fell under the broad themes of socio-cultural beliefs, political context, and economic conditions and included stigmatizing cultural attitudes towards disability, stakeholder collaboration, political will, government budget, and familial economic constraints. Additionally, participants felt that attitudes, funding and availability of resources, physical barriers, and teachers were common barriers that local actors face during inclusive education implementation. Key global factors identified by participants were external funding and global doctrine for inclusive education.

Global and local factors were found to intersect and diverge in different ways that served to facilitate or inhibit inclusive education efforts. Points of intersection that facilitated inclusive education efforts were global documents intersecting with local needs and the global funding priority area intersecting with local reliance on donor funds. A point of divergence that inhibited inclusive education efforts was conflicting global and local attitudes about disability and inclusive education. Additionally, participants shared instances of local resistance, adaptation (though minimal), and subterfuge.

Together, these findings illustrate the complex and dynamic relationship between local and global forces in the case of inclusive education policy appropriation. Tanzania's national inclusive policy formation and implementation process is clearly an interactive process between

the global and the local that is built upon spaces of uneven and common ground. As inclusive

education continues to expand within Tanzania and globally, it is important to consider the

interplay between global and local forces to address barriers and create sustainable educational

initiatives that meet their intended purpose of supporting the education of children with

disabilities.

APPENDICES

APPENDIX A

Interview Protocols

Note: These interviews will be semi-structured. The protocols are subject to conversational variation and use of probes as indicated. Below are the main questions that I asked my participants.

Interview Protocol: Ministry

Before we begin do you have any questions for me that I can answer or clarify? Shall we begin?

Let us begin with some background questions.

1. Can you please tell me briefly about your current responsibilities and how long you have been working at [insert name of Ministry department]?
2. What does inclusive education mean to you? (probe for source of definition, for scope of definition - if mention disability probe for definition of disability, for example of what inclusive education looks like)

Now let's move on to some questions about your views on the formation of inclusive education policy in Tanzania to help me understand the process of policy formation in this context.

3. In your opinion, what triggered the creation of an inclusive education policy in Tanzania? (probe for most important historical moments, for international versus grassroots pressures, for who was motivated to create an inclusive education policy and why)
4. Who do you feel were the key policy actors and organizations that were involved in the formation of the policy? Who had the greatest influence and why?
5. Compared to other areas, do you feel that inclusive education is a priority policy area for Tanzania? Why or why not?
6. Is there anything else that you would like to share that you think is important for me to understand how Tanzania's inclusive education policy was formed?

Now I would like to ask you some questions about global influences on inclusive education policy formation and implementation in Tanzania.

7. Do you think that the ideas represented in Tanzania's inclusive education policy are more representative of global ideas, local ideas, or both?
8. Are you familiar with global initiatives for inclusive education such as Education for All, Universal Primary Education as expressed in the Millennium Development Goals, and the Salamanca Statement and Framework for Action on Special Needs Education?
   a. (If respond no, explain): These types of global initiatives say that all children should have access to quality education in inclusive settings, regardless of their ability or background. What do you think about these types of global initiatives?

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b. (If respond yes, probe further): What do you think about these types of global initiatives? Are there any additional global initiatives I did not mention that you feel inform Tanzania's inclusive education policy?
    i. How have these global initiatives influenced Tanzania's inclusive education policy formation and implementation? (probe for direct and indirect influences)
    ii. Has the reception in Tanzania been warm, lukewarm, or cold? Why do you think that may be the case? (probe for examples)

Next I would like to learn about the activities of [insert name of Ministry department] in the formation and implementation of Tanzania's inclusive education policy.

9. Has your department been involved in the formation of Tanzania's inclusive education policy?
    a. (If respond no): *Skip to question 10
    b. (If respond yes):
        i. Can you tell me about how your department was involved in policy formation? (probe for departmental and personal roles and responsibilities, for relevant documents/pamphlets)
        ii. What led your department to do this? (probe for decision making process and structure, for local/global policy models or guidelines)
10. Has your department been involved in the implementation of Tanzania's inclusive education policy?
    a. (If respond no): Who do you feel is responsible for implementing the policy and why? Can you tell me about some of the other areas your department focuses on? *Skip to question 11
    b. (If respond yes):
        i. Can you please describe the inclusive education implementation strategies and programs that your department is doing? (probe for examples, for implementation locations, for relevant documents/pamphlets)
        ii. Who is responsible for carrying out these implementation efforts? (probe for layers of accountability, for flow of implementation from national to local level)
        iii. How are these implementation strategies funded?
        iv. What led your department to implement these strategies? (probe for decision making process and structure, for local/global implementation models or guidelines)
        v. Are these implementation strategies working? Why or why not?

1. What sorts of factors would you say influence your implementing strategies? (e.g., economic conditions, political context, culture, religion)
2. Are some of these factors particularly helpful to your implementation efforts? What is the greatest hindrance?

vi. Has your department partnered or consulted with international governments or global organizations in your efforts to implement inclusive education policy?

1. (If respond no): Are there any particular reasons why [insert name of Ministry department] decided not to partner with global organizations?
2. (If respond yes, probe for power differentials, for resistance, adaptation and subterfuge):
   a. What are their roles and responsibilities? What are yours? (probe for frequency of partnerships)
   b. Was there any conflict of ideas or approaches between your department and the global partner? (If respond yes): How did you reach an agreement? (probe for positive versus negative experiences)

11. Does your department have any inclusive education implementation plans for the future? Describe.

Let's close with a question about the future of inclusive education in Tanzania.

12. Do you personally believe that inclusive education has been achieved in Tanzania? Can it be achieved? Why or why not? What needs to happen to make this possible? (probe for changes in policy and implementation, for change at different levels, for timeline)

Lastly,

13. Can you recommend any other people that I should talk to who would be able to help me understand inclusive education policy formation and implementation in Tanzania? (probe for names and contact information)

That ends our interview. Nime shukuru.

<center>**Interview Protocol: NGOs**</center>

Before we begin do you have any questions for me that I can answer or clarify? Shall we begin?

Let us begin with some background questions.

1. Can you please tell me briefly about your current responsibilities and how long you have been working at [insert name of NGO]?
2. What does inclusive education mean to you? (probe for source of definition, for scope of definition - if mention disability probe for definition of disability, for example of what inclusive education looks like)

Next I would like to learn about the activities of [insert name of NGO] in the formation and implementation of Tanzania's inclusive education policy.

3. Has your organization been involved in the formation of Tanzania's inclusive education policy?
   b. (If respond no): *Skip to question 4
   c. (If respond yes):
      i. Can you tell me about how your organization was involved in policy formation? (probe for departmental and personal roles and responsibilities, for relevant documents/pamphlets)
      ii. What led your organization to do this? (probe for decision making process and structure, for local/global policy models or guidelines)
4. Has your organization been involved in the implementation of Tanzania's inclusive education policy?
   d. (If respond no): Who do you feel is responsible for implementing the policy and why? Can you tell me about some of the other areas your organization focuses on? *Skip to question 5
   e. (If respond yes):
      i. Can you please describe the inclusive education implementation strategies and projects that your organization is doing? (probe for examples, for implementation locations, for relevant documents/pamphlets)
      ii. Who is responsible for carrying out these implementation efforts? (probe for layers of accountability, for flow of implementation from national to local level)
      iii. How are these implementation strategies funded?
      iv. What led your organization to do this project? (probe for decision making process and structure, for local/global implementation models or guidelines)
      v. Are these implementation strategies working? Why or why not?

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1. What sorts of factors would you say influence your implementing strategies? (e.g., economic conditions, political context, culture, religion)
2. Are some of these factors particularly helpful to your implementation efforts? What is the greatest hindrance?

vi. Has your organization partnered or consulted with international governments or global organizations in your efforts to implement inclusive education policy?
   1. (If respond no): Are there any particular reasons why your organization decided not to partner with global organizations?
   2. (If respond yes, probe for power differentials, for resistance, adaptation and subterfuge):
      a. What are their roles and responsibilities? What are yours? (probe for frequency of partnerships)
      b. Was there any conflict of ideas or approaches between your department and the global partner? (If respond yes): How did you reach an agreement? (probe for positive versus negative experiences)

5. Does your organization have any inclusive education implementation plans for the future? Describe.

Now let's move on to some questions about your views on the formation of inclusive education policy in Tanzania to help me understand the process of policy formation in this context.

6. In your opinion, what triggered the creation of an inclusive education policy in Tanzania? (probe for most important historical moments, for international versus grassroots pressures, for who was motivated to create an inclusive education policy and why)
7. Who do you feel were the key policy actors and organizations that were involved in the formation of the policy? Who had the greatest influence and why?
8. Compared to other areas, do you feel that inclusive education is a priority policy area for Tanzania? Why or why not?
9. Is there anything else that you would like to share that you think is important for me to understand how Tanzania's inclusive education policy was formed?

Now I would like to ask you some questions about global influences on inclusive education policy formation and implementation in Tanzania.

10. Do you think that the ideas represented in Tanzania's inclusive education policy are more representative of global ideas, local ideas, or both?

11. Are you familiar with global initiatives for inclusive education such as Education for All, Universal Primary Education as expressed in the Millennium Development Goals, and the Salamanca Statement and Framework for Action on Special Needs Education?
    a. (If respond no, explain): These types of global initiatives say that all children should have access to quality education in inclusive settings, regardless of their ability or background. What do you think about these types of global initiatives?
    b. (If respond yes, probe further): What do you think about these types of global initiatives? Are there any additional global initiatives I did not mention that you feel inform Tanzania's inclusive education policy?
        i. How have these global initiatives influenced Tanzania's inclusive education policy formation and implementation? (probe for direct and indirect influences)
        ii. Has the reception in Tanzania been warm, lukewarm, or cold? Why do you think that may be the case? (probe for examples)

Let's close with a question about the future of inclusive education in Tanzania.

12. Do you personally believe that inclusive education has been achieved in Tanzania? Can it be achieved? Why or why not? What needs to happen to make this possible? (probe for changes in policy and implementation, for change at different levels, for timeline)

Lastly,

13. Can you recommend any other people that I should talk to who would be able to help me understand inclusive education policy formation and implementation in Tanzania? (probe for names and contact information)

That ends our interview. Nime shukuru.

Before we begin do you have any questions for me that I can answer or clarify? Shall we begin?

Let us begin with some background questions.

1. Can you please tell me briefly about your current responsibilities and how long you have been working at [insert name of INGO]?
2. What does inclusive education mean to you? (probe for source of definition, for scope of definition - if mention disability probe for definition of disability, for example of what inclusive education looks like)

Next I would like to learn about the activities of [insert name of INGO] in the formation and implementation of Tanzania's inclusive education policy.

3. Has your organization been involved in the formation of Tanzania's inclusive education policy?
    f.   (If respond no): *Skip to question 4
    g.   (If respond yes):
        i.   Can you tell me about how your organization was involved in policy formation? (probe for departmental and personal roles and responsibilities, for relevant documents/pamphlets)
        ii. What led you/your organization to do this? (probe for decision making process and structure, for local/global policy models or guidelines)
4. Has your organization been involved in the implementation of Tanzania's inclusive education policy?
    h.   (If respond no): Who do you feel is responsible for implementing the policy and why? Can you tell me about some of the other areas your organization focuses on? *Skip to question 5
    i.   (If respond yes):
        i.   Can you please describe the inclusive education implementation strategies and projects that your organization is doing? (probe for examples, for implementation locations, for relevant documents/pamphlets)
        ii. Who is responsible for carrying out these implementation efforts? (probe for layers of accountability, for flow of implementation from national to local level)
        iii. How are these implementation strategies funded?
        iv. What led your organization to do this project? (probe for decision making process and structure, for local/global implementation models or guidelines)
        v.   Are these implementation strategies working? Why or why not?

1. What sorts of factors would you say influence your implementing strategies? (e.g., economic conditions, political context, culture, religion)
2. Are some of these factors particularly helpful to your implementation efforts? What is the greatest hindrance?

    vi. Has your organization partnered or consulted with the Ministry or Tanzanian civil society organizations in your efforts to implement inclusive education policy?

1. (If respond no): Are there any particular reasons why [insert name of INGO] decided not to partner with local organizations?
2. (If respond yes, probe for power differentials, for resistance, adaptation and subterfuge):
   a. What are their roles and responsibilities? What are yours? (probe for frequency of partnerships)
   b. Was there any conflict of ideas or approaches between your organization and your local partner? (If respond yes): How did you reach an agreement? (probe for positive versus negative experiences)

5. Does your organization have any inclusive education implementation plans for the future? Describe.

Now let's move on to some questions about your views on the formation of inclusive education policy in Tanzania to help me understand the process of policy formation in this context.

6. In your opinion, what triggered the creation of an inclusive education policy in Tanzania? (probe for most important historical moments, for international versus grassroots pressures, for who was motivated to create an inclusive education policy and why)
7. Who do you feel were the key policy actors and organizations that were involved in the formation of the policy? Who had the greatest influence and why?
8. Compared to other areas, do you feel that inclusive education is a priority policy area for Tanzania? Why or why not?
9. Is there anything else that you would like to share that you think is important for me to understand how Tanzania's inclusive education policy was formed?

Now I would like to ask you some questions about global influences on inclusive education policy formation and implementation in Tanzania.

10. Do you think that the ideas represented in Tanzania's inclusive education policy are more representative of global ideas, local ideas, or both?

11. Are you familiar with global initiatives for inclusive education such as Education for All, Universal Primary Education as expressed in the Millennium Development Goals, and the Salamanca Statement and Framework for Action on Special Needs Education?
    a. (If respond no, explain): These types of global initiatives say that all children should have access to quality education in inclusive settings, regardless of their ability or background. What do you think about these types of global initiatives?
    b. (If respond yes, probe further): What do you think about these types of global initiatives? Are there any additional global initiatives I did not mention that you feel inform Tanzania's inclusive education policy?
        i. How have these global initiatives influenced Tanzania's inclusive education policy formation and implementation? (probe for direct and indirect influences)
        ii. Has the reception in Tanzania been warm, lukewarm, or cold? Why do you think that may be the case? (probe for examples)

Let's close with a question about the future of inclusive education in Tanzania.

12. Do you personally believe that inclusive education has been achieved in Tanzania? Can it be achieved? Why or why not? What needs to happen to make this possible? (probe for changes in policy and implementation, for change at different levels, for timeline)

Lastly,

13. Can you recommend any other people that I should talk to who would be able to help me understand inclusive education policy formation and implementation in Tanzania? (probe for names and contact information)

That ends our interview. Nime shukuru.

Interview Protocol: Faculty

Before we begin do you have any questions for me that I can answer or clarify? Shall we begin?

Let's begin with some background questions.

1. Can you please tell me briefly about your current responsibilities and how long you have been working at [insert name of university]?
2. What does inclusive education mean to you? (probe for source of definition, for scope of definition - if mention disability probe for definition of disability, for example of what inclusive education looks like)

Now let's move on to some questions about your views on the formation of inclusive education policy in Tanzania to help me understand the process of policy formation in this context.

3. In your opinion, what triggered the creation of an inclusive education policy in Tanzania? (probe for most important historical moments, for international versus grassroots pressures, for who was motivated to create an inclusive education policy and why)
4. Who do you feel were the key policy actors and organizations that were involved in the formation of the policy? Who had the greatest influence and why?
5. Compared to other areas, do you feel that inclusive education is a priority policy area for Tanzania? Why or why not?
6. Is there anything else that you would like to share that you think is important for me to understand how Tanzania's inclusive education policy was formed?

Now I would like to ask you some questions about global influences on inclusive education policy formation and implementation in Tanzania.

7. Do you think that the ideas represented in Tanzania's inclusive education policy are more representative of global ideas, local ideas, or both?
8. Are you familiar with global initiatives for inclusive education such as Education for All, Universal Primary Education as expressed in the Millennium Development Goals, and the Salamanca Statement and Framework for Action on Special Needs Education?
   a. (If respond no, explain): These types of global initiatives say that all children should have access to quality education in inclusive settings, regardless of their ability or background. What do you think about these types of global initiatives?
   b. (If respond yes, probe further): What do you think about these types of global initiatives? Are there any additional global initiatives I did not mention that you feel inform Tanzania's inclusive education policy?

<ol start="9">
How have these global initiatives influenced Tanzania's inclusive education policy formation and implementation? (probe for direct and indirect influences)
Has the reception in Tanzania been warm, lukewarm, or cold? Why do you think that may be the case? (probe for examples)

Next I would like to discuss inclusive education policy implementation and the role of the government and international and local organizations.

<ol start="9">
Who do you feel is responsible for implementing the policy and why?
Which international organizations, government departments, and local civil society organizations are taking the greatest action to implement the policy? Which are taking the least action?
   <ol type="a">
   Can you describe the types of implementation strategies that [insert name of identified organization] is taking? (probe for detailed examples, for funding sources, for flow of implementation from national to local school level, for what leads organizations to do this work, for future implementation plans) *Repeat question for each organization identified

Are these implementation strategies working? Why or why not?
   <ol type="a">
   What sorts of factors would you say influence implementing strategies in Tanzania? (e.g., economic conditions, political context, culture, religion)
   Which of these factors are particularly helpful to implementation efforts? What is the greatest hindrance?

Does the government or local organizations partner or consult with international governments or organizations in their implementation efforts?
   <ol type="a">
   How are roles and responsibilities typically divided between global and local partners? (probe for frequency of partnerships)
   Do you feel that there are any conflicts of ideas or approaches between global and local partners? (If respond yes): How are conflicts commonly resolved?
   Can you think of any reasons why the government or local organizations might decide not want to partner with global organizations?

Let's close with a question about the future of inclusive education in Tanzania.

<ol start="13">
Do you personally believe that inclusive education has been achieved in Tanzania? Can it be achieved? Why or why not? What needs to happen to make this possible? (probe for changes in policy and implementation, for change at different levels, for timeline)

Lastly,

14. Can you recommend any other people that I should talk to who can help me understand inclusive education policy formation and implementation in Tanzania? (probe for names and contact information)

That ends our interview. Nime shukuru.

APPENDIX B

Informed Consent Forms

Research Project: Inclusive Education in Tanzania
Alisha Brown, M.A., doctoral candidate in Education Policy, Michigan State University
Contact Information: brown248@msu.edu

INTERVIEW CONSENT FORM

You are invited to participate in a research project about inclusive education in Tanzania. You have been selected to participate in this study because you have participated in inclusive education policy formation or implementation or you have witnessed its impact in a particular community in Tanzania. The purpose of this research project is to understand the appropriation of inclusive education policy in Tanzania.

With your permission, I would like to ask you some questions about your participation and experiences with inclusive education. Your participation in this project is voluntary. You may refuse to participate or withdraw from this study at any time without penalty. I estimate that the interview will take about one hour – but you are free to stop it at any time. With your permission the interview will be audio recorded. However, you may elect to participate in this research project without being recorded electronically. The audiotapes and transcriptions, as well as all other notes and written data collected, will be kept in a locked cabinet in my home and your privacy will be protected to the maximum extent allowable by law. All information disclosed in the interview will be kept under a pseudonym. Data collected from the interview will be held in confidence.

You will have the opportunity to ask questions or express concerns about your participation in this research at any time. Every effort will be made to provide you an opportunity to ask questions and express concerns throughout the interview process. You will be given the opportunity to review information gathered in relation to your participation in the study, which may be submitted for publication in one or more professional journals pertaining to education. In any and all cases, your anonymity will be maintained to the fullest extent of the law.
You will not directly benefit from your participation in this study. However, your participation in this study may contribute to the understanding of inclusive education in Tanzania.

There are no foreseeable risks associated with participation in this study. This research is not being used for tangible personal benefits by the persons responsible for designing it nor do they have finanical interests in the service being examined. The information gathered in the course of this research project is part of my studies as a graduate student in Educational Policy at Michigan State University. My goal is to obtain a better understanding of the formation and implementation of inclusive education policy in Tanzania so that I may use this research for my doctoral dissertation.

If there are any questions or concerns over your rights please feel free to contact the principal investigator (Dr. Amita Chudgar, Faculty, College of Education, Michigan State University, 408 Erickson Hall, East Lansing MI 48824-1034 USA, PHONE (517) 353-5342, amitac@msu.edu). If you have questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, the Michigan State University's Human Research

Protection Program at (517) 355-2180, Fax (517) 432-4503, or e-mail irb@msu.edu or regular mail at 408 W. Circle Dr. Rm 207 Olds Hall, MSU, East Lansing, MI 48824

Your signature below indicates your voluntary agreement to participate in this study.
_____ Date: _____
□ yes/no to audio recording
You will be given a copy of this form to keep.

Jina la mradi: Elimu Jumuishi katika nchini ya Tanzania
Alisha Brown, M.A., Mwanafunzi wa Shahada ya Uzamivu, Masomo ya Sera za Elimu, Chuo Kikuu cha Michigan State, East Lansing, USA.
Anwani ya barua pepe: brown248@msu.edu

FOMU YA RIDHAA YA MAHOJIANO

Unaombwa kushiriki katika utafiti kuhusu elimu jumuishi katika Tanzania. Umechaguliwa kushiriki katika utafiti huu kwa sababu ama umewahi kushiriki katika sera za elimu jumuishi au umeshuhudia manufaa ya programu za elimu jumuishi katika jamii fulani hapa nchini Tanzania. Nia ya utafiti huu ni kuelewa sera hizi nchini Tanzania.

Ukikubali, ningependa kukuuliza maswali machache kuhusu kushiriki kwako na uzoefu wako katika elimu jumuishi. Kushiriki kwako katika mradi huu ni kwa hiari yako tu. Unaweza kukataa kushiriki au kujiondoa kutoka kwenye utafiti huu wakati wo wote bila adhabu. Ninakadiria kwamba mahojiano yatachukua muda wa saa moja na nusu hivi—lakini unaweza kuacha kushiriki wakati wo wote. Ukikubali, mahojiano yatarekodiwa. Hata hivyo, unaweza kuamua kushiriki katika utafiti huu bila kurekodiwa. Nitaweka kanda na unukuzi pamoja na kumbukumbu zingine zote katika kabati lililofungwa nyumbani kwangu na jina lako pamoja na kushiriki kwako katika mradi huu zitahifadhiwa kulingana na sheria. Habari zote utakazozitoa katika mahojiano hazitatumia majina yako halisi na zitahifadhiwa kwa siri.

Utapewa fursa ya kuuliza maswali au kueleza wasiwasi wako juu ya utafiti huu wakati wo wote. Tutajitahidi kukupa fursa ya kuuliza maswali na kueleza wasiwasi wako wakati wo wote mahojiano yanapoendelea. Utapewa nafasi ya kupitia taarifa zitakazokusanywa kuhusu kushiriki kwako katika utafiti huu, ambao unaweza kuwasilishwa ili kuchapishwa katika majarida ya elimu. Kulingana na sheria, hakuna wakati jina lako litatajwa. Hutafaidika binafsi kutokana na kushiriki kwako katika utafiti huu. Lakini, kushiriki kwako katika utafiti huu kutachangia katika kuelewa vile shule zinavyotekeleza sera ya elimu jumuishi katika Tanzania na matokeo yake. Hakuna madhara yanayotarajiwa kutokea kutokana na kushiriki kwako. Kushiriki kwako kunaweza kuchangia kuelewa elimu jumuishi katika nchi ya Tanzania.

Hakuna hatari itakayotokea kutokana na kukishiriki kwako katika mradi huu. Utafiti huu hutumiwi kuwafaidi watu walioupanga mradi huu au kuwawezesha kupata malipo kutokana na huduma zinazochunguzwa. Hawakusudii kunufaika kutoka programu au sera za elimu jumuishi. Habari zote zitakazokusanywa katika utafiti huu zitakuwa sehemu ya masomo yangu kama mwanafunzi wa shahada ya uzamivu katika masomo ya sera ya elimu katika Chuo Kikuu cha Michigan State, nchini Marekani. Lengo langu ni kuelewa vizuri matayarisho na utekelezaji wa elimu jumuishi katika Tanzania ili niweze kutumia matokeo ya utafiti huu katika tasnifu yangu ya shahada ya uzamivu.

Iwapo una maswali au wasiwasi juu ya haki zako katika utafiti huu, tafadhali wasiliana na mtafiti mkuu (Daktari Amita Chudgar, Faculty, College of Education, Michigan State University, 408 Erickson Hall, East Lansing MI 48824-1034 USA, PHONE 517-353-5342, amitac@msu.edu). Iwapo una maswali au wasiwasi juu ya haki zako kama mshiriki katika mradi huu au kama huridhiki wakati wo wote juu ya jambo lo lote katika utafiti huu wasiliana, kwa siri kama unataka, kwa kupiga simu au kuandika: Michigan State University's Human Research Protection

Program at 517-355-2180, Fax 517-432-4503, au tumia barua pepe: irb@msu.edu au barua ya kawaida kwa anwani hii: 408 W. Circle Dr. Rm 202 Olds Hall, MSU, East Lansing, MI 48824

Saini yako hapa chini inaonyesha umekubali kwa hiari kushiriki katika mradi huu.

Saini:_____ Tarehe: _____

□ Ndio/hapana kurekodiwa kama sehemu ya mradi huu.

Utapewa nakala ya formu hii ubaki nayo.

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