Including the Excluded
Recommendations for Improving the Enrollment of Disabled Children in Primary School in the United Republic of Tanzania

A Master’s Project prepared by Victoria Wilson
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Finally, I would like to thank the people of Tanzania who during my short time there warmly welcomed me and inspired me to use this opportunity to give back, even in this “small” way. Asante Sana.
EXECUTIVE SUMMARY

Policy Question

What social, economic and environmental factors hinder the enrollment of disabled, primary school-aged children in the United Republic of Tanzania, and how can the government turn the country’s existing educational system into an inclusive one that overcomes these barriers?

Background

The definition of disability has changed over the past few decades so that the root of the cause is not an individual’s impairment but the social, environmental and attitudinal barriers established by society. This new definition of disability, called the social model, explains the cycle of impairment and poverty seen around the world, including the United States. Once an individual becomes impaired, he becomes socially excluded from society. If he is young, he is often excluded from a country’s education system because it lacks the ability to accommodate him or because he is actively discriminated against due to the stigma of disability. Lack of education leads to limited employment choices, or no employment choices, which in turn leads to poverty. Poverty leads to living in unsanitary, crowded conditions that can either lead to an exasperation of an existing impairment or an increased chance of disability amongst those living with the impaired person. The vicious cycle then starts all over again.

Although statistics about disability worldwide are unreliable, it is estimated that 10 percent of the world’s population is disabled; 200 million of them are children. In the United Republic of Tanzania, 7.8 percent of the population is disabled in 2008. Only 4 out of 10 disabled children were enrolled in primary school 2008, and according to the
country’s 2008 National Disability Survey, 16 percent were refused entry to schools.\textsuperscript{1}

Thus, these children are fated to continue living in poverty and potentially transmitting poverty and disability on to their children.

The international community, along with the Government of Tanzania, have not ignored the fact disabled children face severe barriers to school enrollment. Several conventions, most importantly the UN Convention on the Rights of Persons with Disabilities, have stated that disabled children have the right to education and that countries have the duty to ensure their educational systems include them. This new model of education is called inclusive education, which is simply, “a process of addressing and responding to the diversity of needs of learners through increasing participation in learning, cultures and communities, and reducing exclusion within and from education”.\textsuperscript{2}

Tanzania has signed the UN Convention, established legislation that reflects this change towards inclusive education and created a basic policy framework. However, after nearly a decade, Tanzanian disabled, primary school-aged children are still being excluded. The goal of this project is to determine what barriers contribute to low rates of school enrollment amongst the disabled in Tanzania in the hopes of discovering how to best change the educational system so that it is more inclusive.

**Data and Methodology**

The data for this project comes from Tanzania’s 2002 Census, which was the country’s first census to include a module on disability. Four probit regression models were created, two that predict the probability of childhood disability and two that predict the probability of primary school enrollment. Each of the four models has a set of
variables referring to individual, dwelling and household head characteristics; however, two of the models had variables referring specifically to mothers in order to analyze the extent mothers have influence on both of the dependent variables. The goal of these regressions is to assess the social, economic and environmental conditions in which disabled children lived at the time Tanzania began developing its policies.

After analyzing the results of the regressions, it was discovered that the social model is correct; disabled children in Tanzania do appear to be trapped in a cycle of poverty that both excludes from economic advancement and social integration. In no way does the analysis definitively establish the cause of educational exclusion or determine exactly what mechanism drives the poverty cycle.

**Case Studies**

Knowing the barriers to educational inclusion in Tanzania is important, but it is equally important to try to figure out how the country can overcome them. Technically, there is no universally agreed upon definition of what qualifies as an inclusive education system. However, after reviewing documents from UNESCO and the UN Special Rapporteur on Rights to Education, a twenty-two point criteria was created to evaluate different countries’ approaches to inclusive education. Three countries, South Africa, India, the United States, were determined to be models for certain aspects of the created inclusive education criteria that Tanzania can learn a great deal from.

**Recommendations**

The following recommendations were created based on the above case studies, Tanzania’s existing education programs and initiatives and the social barriers identified in this paper:
1. Commission a study to assess the causes behind the low school enrollment of children with disabilities.
2. Develop a concrete, nationally recognized definition of inclusive education.
3. Integrate inclusive education priorities into existing educational programs in order to form one cohesive inclusive education strategy.
4. Give District Councils more control and flexibility to implement inclusive education strategies.
5. Introduce greater accountability into all levels of the educational system.
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I. POLICY QUESTION

What social, economic and environmental factors hinder the enrollment of disabled, primary school-aged children in the United Republic of Tanzania, and how can the government turn the country’s existing educational system into an inclusive one that overcomes these barriers?

II. BACKGROUND

The World Health Organization (WHO) estimates that 10 percent of the global population is disabled, which is approximately 650 million individuals, 200 million of whom are children. According to WHO’s current Disability and Rehabilitation Action Plan, disability’s prevalence worldwide is increasing because of an increase in population growth, ageing and the lengthening of life, among other things. Some common causes of disability are diabetes, cardiovascular disease, injuries from road traffic crashes and conflicts, birth defects, malnutrition and HIV/AIDS.

In the United Republic of Tanzania, for now on referred to as Tanzania, the prevalence of disability is 7.8 percent, which translates to 2.4 million people, based on the 2008 Tanzania Disability Survey. Rural areas have a higher rate, 8.4 percent, than urban areas, where the average rate of 6.4 percent. The rate of disability increases with age but is the same for men and women. Finally, vision impairment was the leading cause of activity limitation for those who were surveyed, followed by impairment of mobility and hearing. Among disabled children between the ages of 7 and 13 only 4 out of 10 children attended school in 2008. Less than 2 percent of those children attended
special schools, and 16 percent said they were refused entry to schools.\textsuperscript{7} Among adults with disabilities 30 percent of adult PWDS were unemployed, only five percent of those working said they were paid workers, and at the time of the survey 9 percent stated they had lost their job.\textsuperscript{8}

Education is a route to better jobs and thus a path out of poverty. If PWDs are excluded from education, this route is cut off. Intuitively, one knows that less education is associated with less income and vice versa. This project will undertake an analysis of the factors that increase the likelihood that the disabled attend schools and what factors hinder attendance. Research on this topic is important for a number of reasons. Tanzania is one of the poorest countries in the world, and there does appear to be a link between poverty and disability.\textsuperscript{9} The Tanzanian government has recognized this link and has sought to break it by establishing schools that specialize in inclusive education, a practice thought to best address the needs of disabled children and to offer them quality education. However, this policy must be buttressed by an understanding of what factors influence actually influence school enrollment.

III. LITERATURE REVIEW

How is disability defined?

Understanding how disability is currently defined and how that definition came into being gives a better idea of why inclusive education is promoted. The traditional view of disability is called the medical model, which places the problem at the individual level. WHO’s definition of disability as seen in the International Classification of Impairment, Disability and Handicap (ICIDH) is the perfect example of this medical
paradigm. The ICIDH, developed by WHO in 1980, split disability into three dimensions: impairment, disability and handicap. Impairment was defined as, “any loss or abnormality of psychological, physiological, or anatomical structure or function.”\textsuperscript{10} Disability was, “any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being.”\textsuperscript{11} Finally, handicap was the disadvantage an individual has due to his or her impairment or disability, “that limits or prevents the fulfillment of a role that is normal”.\textsuperscript{12} In other words, disease or injury causes an impairment, which, in turn, causes disability that ultimately leads to handicaps.\textsuperscript{13} This view of disability means that proposed interventions would be aimed at curing or, “producing personal adjustment or behavior change”\textsuperscript{14} in the disabled person.

Another line of though rejects this definition, arguing instead that society and not the individual is the source of disablement. Majid Turmusani, a researcher who has done studies on the economic situation of the disabled in Jordan and Afghanistan, explains that the original definition means that the solutions focused on, “creating institutions that contain impairment, rather than facilitating the social inclusion of disabled people”.\textsuperscript{15} As a result of this containment, the disabled person is an “other” who is only worthy of pity and charity.

This criticism of the medical model, while containing the kernel of truth that the definition ignores environmental and social factors, might be unduly harsh. The medical approach in and of itself does not necessarily produce social exclusion, and one cannot deny that a certain degree of medical interventions will be important for any policies concerning the disabled if full social inclusion is to be accomplished.
Nevertheless, scholars and policymakers clearly favor the social model, which addresses the social and political dimensions of disability and is rights based. If WHO’s 1980 ICIDH is the perfect example of the medical model, the United Nation’s Convention on the Rights of Persons with Disabilities is the ideal embodiment of the social model. According to the convention, “persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others.” This model, unlike the medical model, asserts that disability does not stem from impairment. Rather, people with impairments only become disabled when they are forced to interact in a society that discriminates against them in numerous ways. Thus, the solution to disability is to make society conform to the impaired individual and not the other way around.

It should be noted that the Tanzanian government incorporates the social model as the basis of its official definition of disability. The National Policy on Disability states that disability is, “The loss or limitation of opportunities to take part in the normal life of the community on an equal level with others due to temporary or permanent physical, mental or social barriers. Such a loss or limitation could be aggravated by community’s perception of disabled people.”

**What role does disability play in increasing the risk of impoverishment and vice versa?**

The social model is the theoretical basis used to explain the link between disability and poverty. Disabled people are poor because of “the institutional, environmental and attitudinal discrimination faced, from birth or the moment of disablement onward”. As a result of these forms of discrimination, an individual is
excluded from formal and informal education and employment, is socially excluded, is
excluded from basic healthcare and is the lowest priority during the distribution of
precious resources such as food, clean water and land.\textsuperscript{19} Thus, they are prevented from
capitalizing on income generating opportunities. When PWDs do find employment, they
work longer hours that non-disabled people, but their wages are lower.\textsuperscript{20} Those who are
visually and hearing impaired, have epilepsy or multiple sclerosis, and those who are
mentally handicap or suffer from a mental illness have, “severe problems finding and
keeping employment.”\textsuperscript{21} Finally, poverty extends to members of the disabled person’s
family as the inability to find employment means the entire household suffers from a
decrease in income.\textsuperscript{22}

Conversely, someone who is in poverty has an increased chance of becoming
disabled because of being excluded from education and employment and of having
limited access to healthcare.\textsuperscript{23} A result of these exclusions is a lack of intake of vital
nutrients such as iodine and vitamin A, which cause a majority of illness and death
throughout the world.\textsuperscript{24} Young children suffering from malnutrition have a high incident
of mental impairment “that reduces intellectual capacity at home, in school and at
work.”\textsuperscript{25} Poverty further causes disability by forcing individuals to live in unsanitary,
crowded conditions and to accept working in hazardous conditions.\textsuperscript{26}

Even young children face discrimination, which leads to their entrance into the
disability-poverty cycle. Disabled children, even if physically able, are less likely to be
sent to school due to the belief that they will not be able to cope and that the family will
be stigmatized.\textsuperscript{27} In fact, because there is a stigma attached to disability in many
countries, children with disabilities may not have had their births registered.\textsuperscript{28} Thus,
schools may not even know to extend education services to these children because they don’t know they exist. Those who are educated, “often receive inferior treatment, have low expectations of themselves and from others and do not get the support they need to participate equally.”

The previous studies have not concentrated on PWDs in Tanzania; however, there is evidence this correlation between disability and poverty exists in the country. As mentioned before, only 40 percent of disabled children between the ages of 7 and 13 were attending school in 2008. More than half of PWDs ages 15 and above had attended primary school at the time the survey was conducted, and 44 percent had not attended primary school. The numbers are worse for secondary school as only five percent of PWDS 15 years and above had attended secondary school and less than one percent had finished tertiary school. N’nyapule R.C. Madai, Assistant Commissioner of Tanzania’s Department of Social Welfare, states disability and the associated stigma causes PWDs in the country to have little or no education and a lack of the skills necessary to be productive. He further adds, “Globalization, structural adjustment and cost sharing programmes and changes in the structure of our society leave many with disabilities with no meaningful social and economic roles within the community”.

This information implies that aspects of the social model hold in Tanzania; society and government measures exclude PWDs from accessing the basic services such as education needed to become functioning members of their communities. Thus, interventions that address discriminations such as stigma and inaccessible buildings could help extend services to disabled individuals. However, while this explanation is appealing because it acknowledges the environmental factors exasperating disability and it breaks
away from the idea of “blaming the victim”, a more nuanced interpretation may be appropriate. There can be no doubt that the disabled are poor and lack education and labor skills. But, as mentioned in the Background section of this paper, there has simply been no study that provides hard evidence that perceived level of discrimination is what dictates whether a disabled individual will enroll in school. Furthermore, this explanation does not readily provide an answer for where the Tanzanian government should intervene. Should the government attempt to break the cycle between poverty and disability.

**What is inclusive education and how has it been implemented in Tanzania?**

Inclusive education is based on the concept of eliminating the attitudinal, environmental and institutional barriers that prohibit the disabled from accessing educational services. Some form of this concept has been established in international documents since the drafting of the Universal Declaration of Human Rights in 1948. Numerous documents over the pass two decades have specifically defined inclusive education and affirmed that all children have the right to it; one of these documents is the 1994 Salamanca Statement and Framework for Action on Special Needs Education. The statement states schools with an “inclusive orientation are the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society and achieving education for all”\(^{36}\). Creation of an inclusive education system was made an international law with the drafting of the United Nations Convention on the Rights of Persons with Disabilities in 2006. Article 24 of the convention holds state parties to the document legally responsible for ensuring PWDs are not excluded
from the general education system because of their disabilities and that they must have access to inclusive, quality and free primary and secondary education.\textsuperscript{37}

While the concept of inclusive education has been accepted on the global level, there does not appear to be a commonly accepted description of how the system should be implemented on the ground. Part of the reason behind the numerous definitions is that the nature of inclusion means each country is going to have their own policy and guidelines. Nevertheless, the United Nations Educational, Scientific and Cultural Organization (UNESCO) states that inclusive education means making the learning process more flexible by, “addressing and responding to the diversity of needs of all children, youth and adults”.\textsuperscript{38} Essentially, all schools make accommodations for all children regardless of their impairments and any other characteristic such as race, gender, ethnicity, religion, economic status and a diagnosis of HIV/AIDS. Inclusive education does not mean segregating students with impairments by placing them in institutions or special schools with teachers or even simply integrating impaired students with “able-bodied” students but not changing the fact the impaired students receive special education. According to Richard Rieser, these approaches are just more manifestations of seeing the child as a problem and distributes education on the basis of what a child cannot do.\textsuperscript{39}

Inclusive education, on the other hand, sees the education system as the problem and sees possible solutions as including producing aids and equipment from local low-cost materials, developing child-to-child and peer tutoring and making use of community-based rehabilitation programs.\textsuperscript{40} The Tanzanian Education Network (TenMet) in its 2007 Education Sector Review elaborates that the design of inclusive education in Tanzania
should address the fact that disability is a cross-cutting issue and will require coordinated restructuring in “curriculum development (adopting the universal model), assessment, languages of instruction and communication, oral (Kiswahili, English and other foreign languages) and visual (sign language for Deaf people and tactile languages for deaf-blind people).”

Tanzania has made efforts to make education inclusive for all. The country signed the Salamanca Statement and ratified the Convention on the Rights of Persons with Disabilities and the additional protocol on November 11, 2009. Additionally, the government and civil society organizations have worked either independently or in partnership to run inclusive schools around the country. However, based on the number of government documents mentioning inclusive education, it appears the country has only recently begun to truly identify and attempt to remove the barriers to truly making education universal.

The National Policy on Disability, drafted in 2004, was the country’s first attempt at creating a clear, coherent national policy that addresses disability issues. The paper acknowledges that at that time the country’s education system lacked the capacity to truly allow children with disabilities to enroll in school. The school facilities were inaccessible to PWDs and the teacher education and curriculum do not incorporate the needs of disabled children.

The country’s Primary Education Development Plan II (2007-2012) has adopted the inclusive education approach for children with special needs. Some strategies identified in the plan include developing Individualized Education Plans (IEPs) for students, monitoring the attendance and performance of male and female disabled
students, improving the school infrastructure and turning existing special schools into resource centers for mainstream schools (See Appendix A for more details). Finally, and probably most importantly, Tanzania’s parliament enacted the Disability Act in April 2010, which explicitly states all persons with disabilities are entitled to access to public and private schools and education in an inclusive setting. Furthermore, the law establishes the future creation of the National Advisory Council for Persons with Disabilities. The council will consist of the Attorney General and representatives from a variety of ministries, including education, disability organizations and the Commission for Human Rights and Good Governance. Under the law, the Council has the right to monitor compliance with the Disability Law in both the public and private sectors. Finally, the Disability Law gives local governments the authority to safeguard and promote the welfare and rights of persons with disabilities. A provision is made which creates a Council Committee in each district that has the similar responsibilities and duties as the National Council.

By 2008, the UNDP estimated that net enrolment rate in the government estimates that 97.2 percent of children in Mainland Tanzania and 83.4 percent of children in Zanzibar were enrolled in primary school. However, as mentioned above, only four out of ten children with disabilities between the ages of 7 and 13 attend school. This low attendance rate is unacceptable given the number of laws Tanzania has enacted and the number of policies it has created. An analysis needs to be done to evaluate the existing social, economic and environmental barriers to education Tanzanian children with disabilities face in order to gain an understanding of why existing policies might have
failed. Only then can best practices be examined to determine what strategies Tanzania might want to try in the future to have truly universal primary education.

IV. DATA AND METHODOLOGY

Ideally, a person interested in developing an inclusive education policy for Tanzania would first conduct a nationwide study of households with primary school aged children (ages 7-14), both disabled and non-disabled, in order to determine what currently prevents students from enrolling in schools and what household and personal characteristics make a child more likely to be enrolled. The same policymaker might additionally want to do an evaluation of existing schools and the entire educational system to assess the degree of exclusivity in regards to disability.

Due to resource and time constraints, I was unable to conduct such a study. Instead, I first determined what the socioeconomic conditions of the disabled in Tanzanian was like in 2002 and what characteristics were correlates to both disability and school enrollment of primary school aged child in 2002. The goal of such analyses is to verify that there are social barriers to inclusion in the educational system and society. Verification of social barriers, instead of personal barriers strongly related to PWD’s impairment, will justify Tanzania developing an inclusive education policy. Additionally, because Tanzania has not moved beyond the commitment stage of policy development, I evaluated the inclusive education policies of other countries in order to come up with a list of recommendations for future policy development.
The data comes from the 2002 Population Census, which census was Tanzania’s first census to ask questions specifically regarding disability. Respondents were asked whether he or she was disabled, physically handicapped/leprosy, visually impaired, dumb, hearing/speech impaired, albino, mentally handicapped, or multiple handicapped. Additionally, respondents gave information about their sex, age, marital status, educational status, school attendance rate, employment status and occupation, along with the same information for everyone in the household. The census identified 676,502 individuals, or about 2.0 percent of the population of 34.4 million, that self reported as disabled in 2002. For my analysis, I am using a sample from the census of 3,732,735 individuals total, 66,633 of who are disabled.

This estimate of the prevalence of disability in Tanzania is significantly lower than WHO’s estimate of 10 percent. A cause of this discrepancy could be the fact there was a major measurement error during the census collection phase. The interviewer and interviewees during the census taking did not understand questions about which disability categories a respondent falls into because disability means different things to different people due to different backgrounds and the stigma attached to the concept of disability. This measurement error could in fact be the cause of the under-recording of disability. Nevertheless, I was able to draw a sample of over 65,000 disabled individuals, which is large enough for me to comfortably draw some conclusions about the entire disabled population as a whole during that year.

Another potential area of concern is this census is eight years old and was collected before the creation of the country’s National Policy on Disability and Tanzania’s National Strategy for Growth and Poverty Reduction strategy papers. There
is in fact a dataset collected from the national disability study conducted in 2008; however, after repeated attempts to contact the Government of Tanzania, I was unable to obtain this data. Relying on such old information would be a problem if the goal of my analysis were to evaluate any potential changes to the enrollment of disabled primary aged children after the above policy papers were created. However, the goal is to actually try to assess existing barriers prior to the enactment of the bulk of Tanzania’s inclusive education legislation and policies.

V. RESULTS

**Overall Characteristics of the Tanzanian Population in 2002**

In order to gain an understanding of the potential differences between the disabled population in Tanzania and the non-disabled population, these sub-populations were examined across five demographic categories: age, sex, urban-rural status, employment status and occupation type. In four of the five categories, there are distinctive demographic variations between the two groups.

**Table 1. Distribution of disabled and non-disabled individuals across demographic categories**

<table>
<thead>
<tr>
<th>Demographic Category</th>
<th>Disabled</th>
<th>Non-Disabled</th>
<th>Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 6 and below</td>
<td>8%</td>
<td>23%</td>
<td>23%</td>
</tr>
<tr>
<td>Age 7 to Age 14</td>
<td>15%</td>
<td>21%</td>
<td>21%</td>
</tr>
<tr>
<td>Age 15 to Age 22</td>
<td>14%</td>
<td>17%</td>
<td>17%</td>
</tr>
<tr>
<td>Age 23 to Age 50</td>
<td>36%</td>
<td>31%</td>
<td>31%</td>
</tr>
<tr>
<td>Age 51 and above</td>
<td>27%</td>
<td>9%</td>
<td>9%</td>
</tr>
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Table 1. Continued

<table>
<thead>
<tr>
<th></th>
<th>Sex</th>
<th>Male</th>
<th>Female</th>
<th>Male</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>55%</td>
<td>48%</td>
<td>48%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>45%</td>
<td>52%</td>
<td>52%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban-Rural Status</td>
<td>Urban</td>
<td>34%</td>
<td>40%</td>
<td>40%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>66%</td>
<td>60%</td>
<td>60%</td>
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</tr>
<tr>
<td>Employment Status</td>
<td>Employed</td>
<td>41%</td>
<td>52%</td>
<td>52%</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inactive</td>
<td>52%</td>
<td>44%</td>
<td>45%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupation Type</td>
<td>Legislators, Administrators &amp; Managers</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Professionals</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Technicians &amp; Associate Professionals</td>
<td>2%</td>
<td>3%</td>
<td>3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Clerks</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Service &amp; Shop Sales Workers</td>
<td>3%</td>
<td>4%</td>
<td>4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Skilled Agricultural &amp; Fishery Worker</td>
<td>78%</td>
<td>72%</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Craftsmen &amp; Related Trades Workers</td>
<td>4%</td>
<td>4%</td>
<td>4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plant &amp; Machine Operators</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Elementary Occupations</td>
<td>9%</td>
<td>11%</td>
<td>11%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other Occupations</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
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</tr>
</tbody>
</table>

Source: Minnesota Population Center on behalf of the Tanzanian National Bureau of Statistics

In general, the Tanzanian population in 2002 was young as the mean age was approximately 22 years. However, when the disabled population is examined separately from the non-disabled, one finds that the disabled were more likely to be middle-aged than were the able-bodied. The mean age of the disabled in the sample is 36 years. Conversely, the mean age of the non-disabled group is 22 years. The difference in the
means of the two populations is significant at the 1 percent level. When the distribution
of individuals across age groups is analyzed, this difference becomes more evident.

Approximately 60 percent of the population was age 22 or younger, and only 9
percent of the population was age 51 or older. Children between the ages of 7 and 14
made up 21 percent of the whole population. Whereas the non-disabled sub-group
followed the pattern of age distribution of the overall population, the disabled sub-
group’s pattern was a mirror image of the overall pattern. Within the disabled
population, 36 percent were 22 years or younger; 15 percent were 7 years of age to 14
years of age. Non-disabled individuals 22 years or younger make up around 61 percent
of the sub-population and primary school aged children make up 21 percent. Older,
disabled Tanzanians made up 27 percent of the total disabled group while their
counterparts in the non-disabled group only made up 9 percent of the total able-bodied
population. These results are not unexpected as many of the diseases and conditions
causing disability such as glaucoma, arthritis and cardiovascular diseases
disproportionately affect older individuals.

The disabled in Tanzania were more likely to be male in 2002 than the non-
disabled, and this difference is statistically significant. Males made up 55 percent of the
disabled population as they made up 48 percent of the non-disabled population. There
are 9 percentage points between the proportion of males and females in the disabled
population, and only 3 percentage points between the sexes proportion of sexes in the
non-disabled group. One could argue that something about the behavior or the
environments surrounding males in Tanzania make them slightly more susceptible to
disability. While this analysis cannot determine what those exact factors are, one can
make a hypothesis that males might be more susceptible to impairment because of aggressiveness, more risk-taking tendencies or the types of jobs males are more likely to participate in.

Furthermore, PWDs were more likely to live in rural settings than in urban centers in 2002. While 60 percent of non-disabled people lived in the rural areas of Tanzania, 66 percent of disabled people live outside of urban centers. As can be seen in Table 1 above, there are 32 percentage points between the proportion of the disabled population living in rural areas and those living in urban centers. On the other hand, there are 20 percentage points between the rural, non-disabled proportion and the urban, non-disabled proportion.

The urban/rural divide in terms of service provision is widely known, and perhaps there are more disabled individuals in rural settings because there being a limited access to health facilities, prevents individuals from seeking treatments for illnesses that cause impairments. Additionally, even though crowded, unsanitary cities can create conditions leading to disabilities, the lack of clean water and plumping in rural areas can equally make an individual more susceptible to developing impairments. Finally, these results might be indicative of PWDs’ lack of mobility; non-disabled persons are able to move to cities for perhaps greater economic opportunities than disabled persons.

Again, the employment status trends for the disabled and non-disabled individuals are mirror images of each other. Only people 5 years and over were surveyed. Employed in this instance means a person either worked or did not work but were available to work up to twelve months prior to the day of the census. Persons in this category could participate in the production of goods and services for the market, for bartering or for
household consumption.\textsuperscript{51} Note this does not mean that these persons were employed consistently throughout the entire twelve month period prior to the census; they could have engaged in seasonal or temporary work. Approximately 41 percent of the disabled population was employed in 2002, and about 52 percent of the non-disabled was employed.

Those in the unemployed category did not work within twelve months prior to participating in the census but were actively seeking for work or were available during the above time period.\textsuperscript{52} Both the percentages of the disabled and non-disabled populations that fit into this category are small, but the non-disabled’s percentage is higher.

Finally, individuals in the inactive category were not working and not seeking employment. They also could have been unable to work. These persons could be full-time students, elderly or homemakers, or they could have had a disability that made it impossible for them to work.\textsuperscript{53} Unsurprisingly, over 50 percent of the disabled population was inactive.

Judging from the above table, it is unclear whether there was systemic employment discrimination against the disabled going on in Tanzania or if the nature of a disabled person’s condition prohibits them from working. According to Tanzania’s Disabled Persons (Employment) Regulations 1985, registered employers are required to reserve at least two percent of their jobs for registered disabled persons.\textsuperscript{54} However, an employer is exempt from complying with the regulation if they cannot find a potential, qualified disabled employee after reasonable effort or if the condition of the disabled
person’s impairment makes it impossible for him or her to adequately perform a particularly job’s duties.\textsuperscript{55}

Thus, disabled persons could be more likely to be inactive because they lack the skills for formal employment, their impairments make them unable to work or they became frustrated about the lack of job opportunities and stopped seeking employment. However, since decisions about job applicant qualifications are up to the discretion of the employer, it is possible that employers discriminate against the disabled.

Those in the inactive category could be full-time students or homemakers. But, since most of the disabled were older, there were more males than females in the disabled population, and school attendance was low for this population, it is unlikely that the percentage of disabled in the inactive is high due to studying or household chores. Even those disabled persons in the employed category may not have been necessarily employed in the formal sector. They also could have been subject to job discrimination and decided to focus on the production of agricultural goods to sell on the market or for household consumption.

Examining what types of occupations the disabled and non-disabled were mostly likely to engage in at the time of the census can test the above hypothesis about those in the employed category. As seen in Table 7, the disabled are less likely than the non-disabled to be in any occupation types except for skilled agricultural & fishery and craftsmen & related trades. Of course, there is no indication about why the disabled participate in agricultural work and why they are craftsmen.

In terms of this study, it makes sense to look closely at the school attendance records and literacy of primary school-aged children who were disabled and were able-
bodied in 2002. Close to 55 percent of disabled children were not attending school in 2002 and had never attended in the past compared to 25 percent of non-disabled children. In fact, non-disabled children ages 7 to 14 years old were almost two times more likely to have been attending school at the time of the census than their disabled counterparts.

Table 2. School attendance for disabled and non-disabled children between the ages of 7 and 14

<table>
<thead>
<tr>
<th>Category of School Attendance</th>
<th>Disabled</th>
<th>Non-Disabled</th>
<th>Total Sub-Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attending school</td>
<td>42%</td>
<td>72%</td>
<td>72%</td>
</tr>
<tr>
<td>Attended school in the past</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Never attended school</td>
<td>55%</td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>Attendance category unknown</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Source: Minnesota Population Center on behalf of the Tanzanian National Bureau of Statistics

These differences are not surprising, and there are a variety of reasons why the differences exist. For instance, it could be due to a lack of schools capable and/or willing to accepted children with disabilities as students. Or, the cause could be that parents do not want to send their disabled children to school because of shame, a lack of money for uniforms and test fees, or a perception that an education is “wasted” on a disabled child. Even when disabled children attend school, it appears that they are more likely to drop out perhaps because of a lack of qualified teachers or other factors causing frustration.

Children with disabilities cannot be analyzed as one group because they all have different impairments. When disabled children are separated by their disability type, we see that children who were deaf or had a hearing impairment were more likely to attend school that children who were blind or mute. Mute children were the least likely to attend school. While blind or visually impaired children did not have the worst school
attendance, they did have the largest proportion of dropouts. For some reason, the education system in Tanzania was more accommodating to deaf students than to mute or blind children in 2002, possibly causing caregivers to be more willing to send their deaf children to school. Either this is the case, or something about the households with deaf children makes parents or other caregivers more comfortable about enrolling their children.

Table 3. School attendance of children between 7 and 14 years old by disability type in 2002

<table>
<thead>
<tr>
<th>Category of School Attendance</th>
<th>Mute</th>
<th>Deaf or hearing-impaired</th>
<th>Blind or vision-impaired</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attending school</td>
<td>23%</td>
<td>50%</td>
<td>44%</td>
</tr>
<tr>
<td>Attended school in the past</td>
<td>1%</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>Never attended school</td>
<td>75%</td>
<td>47%</td>
<td>52%</td>
</tr>
<tr>
<td>Attendance category unknown</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Source: Minnesota Population Center on behalf of the Tanzanian National Bureau of Statistics

Interestingly, the census surveyed the employment status of children over the age of 5. One can analyze whether disabled children are more or less likely to be employed that non-disabled children. This analysis could provide an explanation about school attendance rates. Both disabled and non-disabled children appear to have been equally likely to be inactive; however, close to 11 percent of the non-disabled children were employed and approximately 10 percent of the disabled children were. Thus, it does not appear that disabled children, or non-disabled children, were not attending school because they were employed. Again, even the children who were employed were not necessarily working the entire twelve-month period.
Table 5. Employment status of disabled and non-disabled children between 7 and 14 years old in 2002

<table>
<thead>
<tr>
<th>Employment Status</th>
<th>Disabled</th>
<th>Non-Disabled</th>
<th>Total Sub-Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td>10%</td>
<td>11%</td>
<td>11%</td>
</tr>
<tr>
<td>Unemployed</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Inactive</td>
<td>87%</td>
<td>87%</td>
<td>87%</td>
</tr>
<tr>
<td>Employment status unknown</td>
<td>2%</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Source: Minnesota Population Center on behalf of the Tanzanian National Bureau of Statistics

These inequalities in education are having serious consequences in terms of the ability of disabled children to acquire the necessary life and work skills. Disabled children are overwhelmingly more illiterate than non-disabled children. An important note is the 2002 measured literacy in any language including Kiswahili and English. Thus, a person coded as literate could be able to read and write in Kiswahili and/or English. Lower school attendance for disabled children could be the reason, or it could have something to do with the quality of education impaired children receive even when they do attend school.

Correlates of Disability and School Enrollment

From the above descriptive characteristics, it is clear that the disabled in Tanzania are less educated, less literate and less employed than their able-bodied counterparts.
According to the statistics in the previous situation, this inequality begins early on, as disabled children between the ages of 7 and 14 are highly more likely to have never attended school than non-disabled children their age. None of these statistics explain what conditions actually increase the probability of a primary school aged child becoming disabled or reveal any information about what household and individual characteristics make a primary school aged child more likely to attend school. The answer to these questions are important when seeking to implement inclusive education in a country, as the whole program is predicated on the belief that social barriers such as poverty are the root causes of disability. If these barriers are removed early on, for example through equal access to education, the cycle of poverty-disability will be broken.

In terms of this study, evaluation of barriers can potentially provide a blueprint for future Tanzanian inclusive education policy.

In order to assess the social conditions correlated with childhood disability, I ran two probit regression models. The first model had variables associated with the child, the dwelling, the head of the household and district-level fixed effects. In the second model I added information about the mother. The same steps were followed when finding the correlates of school enrollment, except additionally individual characteristics of child were added.

The rationale behind having two regressions per each dependant variable comes from the uncertainty regarding the potential influence of the mother versus the head of the household. I was confident that dwelling characteristics contributed to disability as unsanitary and unsafe living conditions can cause impairment. Furthermore, these characteristics are indicative of the income level of the household, which is probably
highly correlated with the probability of school enrollment. However, I was unsure about how significant the individual characteristics of the head of the household was versus the characteristics of the mother in terms of contributing to the probabilities of a child being disabled or enrolling in school. After implementing all four probit regressions, I discovered that factoring in the mother’s characteristics is vital to understanding the environmental and social barriers associated with disability and education.

Table 6. Determinants of being a disabled primary school aged child in Tanzania in 2002

<table>
<thead>
<tr>
<th>Variables</th>
<th>Correlates of Disability</th>
<th>Correlates of School Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1: Regression with HH Characteristics</td>
<td>Model 2: Regression with HH and Mother Characteristics</td>
</tr>
<tr>
<td>Child’s Characteristic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>.0739*** (.0078)</td>
<td>.0701*** (.0090)</td>
</tr>
<tr>
<td>Disabled (general)</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Blind</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Deaf</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Mute</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Mother Passed Away</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Dwelling Characteristics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>One married or cohabitating couple</td>
<td>.0059 (0.0089)</td>
<td>.0046 (0.0097)</td>
</tr>
<tr>
<td>Urban Location</td>
<td>-.0065 (0.0099)</td>
<td>.0076 (0.0117)</td>
</tr>
<tr>
<td>Radio</td>
<td>-.0588*** (0.0084)</td>
<td>-.0556*** (0.0099)</td>
</tr>
<tr>
<td>Latrine</td>
<td>.0117 (0.0135)</td>
<td>.0168 (0.0159)</td>
</tr>
<tr>
<td>Piped Water</td>
<td>.0002 (0.0010)</td>
<td>.0008 (0.0012)</td>
</tr>
<tr>
<td>Dirt Floor</td>
<td>.0569*** (0.0113)</td>
<td>.0428*** (0.0134)</td>
</tr>
<tr>
<td>Asbestos Roof</td>
<td>.0185 (0.0808)</td>
<td>.0159 (0.0928)</td>
</tr>
<tr>
<td>Electricity</td>
<td>-.0661*** (0.0177)</td>
<td>-.0159** (0.0213)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Household Head Characteristics</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Disabled (general)</td>
<td>.2553*** (0.2044)</td>
<td>.1022*** (0.281)</td>
<td>-.0404*** (0.0103)</td>
<td>-.0052 (0.0134)</td>
</tr>
<tr>
<td>Educational Attainment Level</td>
<td>.2249** (0.0876)</td>
<td>.5152 (0.4831)</td>
<td>-.8365*** (0.0412)</td>
<td>-.7357*** (0.2382)</td>
</tr>
<tr>
<td>Age</td>
<td>.0017*** (0.0003)</td>
<td>.0010** (0.0004)</td>
<td>.0039*** (0.0001)</td>
<td>.0007*** (0.0002)</td>
</tr>
<tr>
<td>Employed</td>
<td>.0073 (0.0059)</td>
<td>.0085 (0.0088)</td>
<td>-.0207*** (0.0024)</td>
<td>-.0273*** (0.0037)</td>
</tr>
<tr>
<td>Literate</td>
<td>-.2537** (1.371)</td>
<td>--</td>
<td>1.09*** (0.0602)</td>
<td>1.1690*** (3.601)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mother’s Characteristics</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Disabled</td>
<td>--</td>
<td>.2908*** (0.0322)</td>
<td>--</td>
<td>-.0601*** (0.171)</td>
</tr>
<tr>
<td>Educational Attainment Level</td>
<td>--</td>
<td>-.0293** (0.0118)</td>
<td>--</td>
<td>.1718*** (0.0051)</td>
</tr>
<tr>
<td>Age</td>
<td>--</td>
<td>.0023*** (0.0006)</td>
<td>--</td>
<td>.0163*** (0.0003)</td>
</tr>
</tbody>
</table>
**Table 6. Continued**

<table>
<thead>
<tr>
<th></th>
<th>Employed</th>
<th>Literate</th>
<th>Constant</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>.0028</td>
<td>.0056*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.0071)</td>
<td>(.0029)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-.0058</td>
<td>.2510***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.0136)</td>
<td>(.0057)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-2.2660***</td>
<td>-.9120***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.0759)</td>
<td>(.0358)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-2.2688***</td>
<td>-.1929***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.0625)</td>
<td>(.0266)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-.0056*</td>
<td>-.9120***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.0071)</td>
<td>(.0358)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-.0058</td>
<td>-.9120***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.0136)</td>
<td>(.0358)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-2.2660***</td>
<td>-.9120***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.0759)</td>
<td>(.0358)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-2.2688***</td>
<td>-.9120***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.0625)</td>
<td>(.0358)</td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-52974.138</td>
<td>-39129.414</td>
<td>-427079.63</td>
</tr>
<tr>
<td>Observations</td>
<td>793,784</td>
<td>578,630</td>
<td>793,784</td>
</tr>
</tbody>
</table>

*p-value <.10; ** p-value <.05; *** p-value <.01

*Source: Minnesota Population Center on behalf of the Tanzanian National Bureau of Statistics*

Being male, owning a radio, living in a dwelling with a dirt floor and being a part of a household where the head is disabled are all statistically significant correlates of primary school aged disability at the 1 percent confidence interval. All of the variables remain significant at this level with and without the mother’s characteristics. After controlling for the mother a male is 7 percent more likely to be disabled than a female. This finding confirms what was suggested in the previous section on the overall characteristics of the disabled in Tanzania, there is something about male behavior that makes them more susceptible to impairment.

The coefficient on owning a radio changes direction once all variables related to the mother is controlled for, after this radio ownership makes a child 6 percent less likely to be disabled. Radio ownership, as mentioned above, indicates material wealth; thus, one can argue based on this result that primary aged disabled children are living in households with a lack of disposable income. But, the variable can also capture the effect of lack of access to information on disability status. Radios, newspapers and televisions are examples of mediums used by the government and others in the public health sector to convey information to people about proper health behaviors such as getting children
vaccinated against certain diseases. Therefore, owning a radio could decrease the probability of childhood disability because parents are able to learn about ways to promote good health from public service announcements.

Having electricity in the house makes a child 7 percent less likely to be disabled. Like radio ownership, this could indicate a link between low economic status and disability. However, also like radio ownership, the variable could be pointing in another direction. Obviously, having no electricity in a house means that members of a household will have to find alternative sources of energy for cooking and heating. According to the World Health Organization, 50-75 percent of people in areas of Africa use solid fuels such as dung, agricultural residues and coal inside of the home. The limited ventilation inside of these dwellings causes illnesses such as respiratory infections, chronic obstructive pulmonary disease and lung cancer. Children, along with women, are the most vulnerable to the effects of indoor pollution from solid fuel burning as individuals in these groups spend the most time inside the home.

Living in a dwelling with a dirt floor remains positive in both Model 1 and Model 2, but the probability changes from 6 percent to 4 percent respectively. Therefore, children living in these structures have a 4 percent greater chance of having a disability than children in dwellings with other flooring materials such as cement. In a study to assess the effect of the implementation of a program to put cement floors into homes that previously had dirt floors in the Mexican state of Coahuila, the researchers found that the change in flooring material increased the health of children in the households. Incidences of diseases such as parasitic infestations, diarrhea and anemia decreased and there was an improvement in the cognitive development of treated children.
Children living in households where the head is disabled have a 10 percent chance of being disabled versus children living with non-disabled heads of households. One plausible explanation for this increased likelihood is that the head of the household is a parent of the child. Therefore, the child inherited his parent’s disability. Or, he became disabled due to the fact the parent was unable to adequately take care of him, leading to malnutrition or possible injury. Another theory behind the variable’s coefficient could be that because the head of the household was disabled, he or she could not go out to find employment or do chores around the house. Dangerous occupations or chores could increase the chances of a child becoming injured, which could lead to a permanent impairment. This theory might appear to contradict this paper’s earlier finding that disabled children in Tanzania were not disproportionately more employed than their able-bodied counterparts in 2002. However, this finding comes from data taken after the child became disabled, not before. There is still the possibility the child became impaired due to an occupational accident.

Three characteristics associated with the mother, her disability status, her educational attainment level and her age, are statistically significant. Children with disabled mothers are 29 percent more likely to be disabled than the children of able-bodied mothers. The age of the other is proven to be significant at the 1 percent level, but the increase in likelihood of childhood disablement as the mother’s age goes up is small, only 0.2 percent. While a large proportion of childhood disabilities in Sub-Saharan Africa appear to be caused by preventable and curable conditions, there is evidence that the genetic makeup of the parents is partly responsible. Therefore, the large and
significant coefficient of the variable associated with the disability status of a child’s mother is not surprising.

Another possible explanation behind the results is that women who are disabled are unable to adequately provide proper nutrition to their children or transport them to health facilities for vaccinations and medical assessments. Additionally, there is the possibility that disabled pregnant women cannot find skilled healthcare workers who know how to give proper obstetrical and/or prenatal care to this particular population. Studies have shown that women who give birth later in life have a higher risk of giving birth to a child with birth defects such as Down’s Syndrome, which explains why there is a positive relationship between a mother’s age and risk of childhood disability.

Once again, the above analysis does in no way prove what causes childhood disability in Tanzania. Rather, the data identifies sources of obstacles preventing disabled primary aged children from full social inclusion.

The most important part of this data analysis is to determine what barriers prevent disabled children between the ages of 7 and 14 from enrolling in school. When individual, dwelling, head of household and mother characteristics are controlled for, disabled children in general are 88 percent less likely to be enrolled in school than able-bodied children. One can rule out the explanation that the results are caused by the fact disabled children are living in areas with a low supply of schools because district fixed effects along with the “urban” variable should control for this possibility. This analysis cannot confirm that the reason disabled primary school aged children have low enrollment rates is because school administrators or teachers are discriminating against them or because existing schools are simply unable to accommodate them; however, this
analysis does not rule out this possibility. Clearly, more rigorous analyses are needed to come to a firm conclusion on this matter. This analysis does shed light on other potential reasons why there is such a strong correlation between childhood disability and low school enrollment. The answer to why there is a strong correlation between disability might lie in the correlates to childhood disability.

As mentioned before, the disability status of both the household head and the mother are highly correlated with childhood disability. It is quite possible that the head of the household and/or the mother might not think spending money on a disabled child’s education is worthwhile because of their own experiences with the education system. Perhaps they believe that any education they received did little to improve their economic and social standing, and so, their disabled children will also not benefit. Or, because they did not complete all of their schooling, they have a low preference for education.

Another possible explanation is that the low level of household income makes parents unable to afford the cost of education in Tanzania. Even though Tanzania abolished school fees and other mandatory expenses in July 2001, there is evidence that parents still had to pay for their child’s education even after the law went into effect. After completing a study in the Mt. Kilimanjaro area of Tanzania, Frances Vavrus and Goodiel Moshi found that the cost of educating primary school age children increased between 2000 and 2006 and that this increase was over and beyond what was expected due to inflations. The cost included general school fees, exam fees, uniforms and sport clothes, books and supplies, transportation, pocket money and other expenses. Of course, this finding does not mean that the school fee abolishment policy is being ignored consistently across Tanzania, but it does lend credence to the claim that disabled children,
who are already impoverished, are kept out of school due to the fact school related expenses take too big a portion of the household’s income.

Analyzing the school enrollment probabilities of children with different disabilities yields some additional issues. For instance, deaf children are 40 percent more likely to be enrolled in school when the mother’s characteristics are controlled for, and mute children are 60 percent less likely to be enrolled in the same model. Again, it is difficult to determine if the cause of the problem lies with schools or with parents. What is clear is that mute children are facing more barriers to education than children with other disabilities.

The key takeaway from this section is that there is evidence that disabled primary school aged children are victims of a poverty trap. They are living in unsanitary, unsafe dwellings, and they are highly likely to be in households where the adults and/or head of the households is disabled, who themselves have a low level of educational attainment. Thus, these children are likely to be poor.

VI. Case Studies

As mentioned above, Tanzania has formally acknowledged inclusive education as a policy priority in several government documents; now Tanzania must move past statements and on to actions. The country will face difficulties when developing a plan of action as it has resource and infrastructure constraints. These obstacles are not insurmountable, and the government can at least start developing an inclusive education strategic plan with concrete goals it can commit to achieving in a reasonable amount of
time. Two key questions are what components must be incorporated in this plan to make it qualify as inclusive, and how can Tanzania address the social and environmental barriers identified in the previous section of this paper in its strategic plan.

By definition, inclusive education is non-standardized; any curriculum or practices is going to be different from classroom to classroom in order to accommodate the needs of each child. Nevertheless, during the 48th International Conference on Education (ICE) on Inclusive Education in November 2008, the International Bureau of Education along with UNESCO and other partners created a set of international inclusive education guidelines that are divided into five areas of action. Additionally, during the Fourth session of the UN Human Rights Council, Special Rapporteur Vernor Muñoz described steps countries can take to ensure the right to education of PWDs is respected. After reconciling the two sets of criteria, twenty-two steps were identified as comprising a strong, inclusive education strategy. These steps can be divided into seven broad categories: resources and legislation, attitudinal change and policy development, investing in early childhood inclusion, inclusive curricula, teacher and school administrator support, community and parental involvement and monitoring and accountability (See Appendix B for complete criteria).

The above criteria are vague; concrete examples from other countries are needed to illustrate each of these areas before attempting to develop recommendations and strategies for Tanzania. No country in the world has an inclusive educational system that fully follows the above steps. Instead, several countries have set themselves apart from others by completing actions to fulfill certain guideline areas. The following examples are not perfect; some of the countries below have a long way to go before achieving a
high level of school enrollment of disabled children. However, each of these countries has excelled

**SOUTH AFRICA**

<table>
<thead>
<tr>
<th>A. Resources &amp; Legislation</th>
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<td>A.1 Constitutional guarantee of free and compulsory basic education for all</td>
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<td>A.4 Sign international conventions or declarations concerning the rights of the disabled</td>
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Definitely, South Africa is one of the countries that have done the most to formally acknowledge the right of disabled children to education and to change attitudes surrounding the PWD’s place in the greater society. Unfortunately, acceptance of “others” was not dominant in South Africa’s past educational policies. While special education in many countries was characterized by marginalization, the discriminatory nature of the South African form of special education was enhanced by the institutionalized racism of the apartheid system. Education for disabled children was divided along racial, cultural and ethnic lines as far back as the late half of the 19th century. During that period of time, churches opened schools for blind and deaf children, which were segregated by race. These actions established the fragmentation subsequently found the system once the state took over the provision of special education in 1890s. By the end of the apartheid regime, there were 18 different departments within the South African Education Department, divided along racial lines and each with their own policies regarding the education of the disabled and funding mechanisms.
Schools for disabled, African children were largely underfunded, as funding for education during this period of time was determined by race.\textsuperscript{68} In other words, “To be black and disabled condemned children, at best, to the poorest and least resourced sector of education and at worst, to no education at all”.\textsuperscript{69} Discrimination in the education sector was compounded by adverse social conditions for the disabled, African child outside of the classroom. Children born to parents working on commercial farms were born into appalling living conditions and poverty; a common payment practice on the farms, the “dop” system, meant paying workers in part with wine.\textsuperscript{70} Provinces where the practice was common, and continues to be common, have high rates of children suffering from fetal alcohol syndrome, which leads to life-long behavioral problems, stunted growth and mental illness.\textsuperscript{71}

An important statement to write here is that even though the apartheid system of education favored white children, white disabled children also suffered from exclusion. The Special Schools Act of 1948 formally separated the special education sector from the mainstream educational system.\textsuperscript{72} Furthermore, all learners with disabilities had difficulty accessing education, as there were very few special schools available during the apartheid regime and those children from poor households could not obtain educational support.\textsuperscript{73} Finally, not only were their inequalities on the basis of race, but also on the basis of geographic locations. Students in urban areas received more funding than those in rural areas.

Since 1994, the South African government has enacted a set of legislation and designed policies in order to develop a cohesive, centralized education system with the purpose of giving \textit{all} children equal educational opportunities and benefits. Chapter 2,
section 9 of the country’s constitution, enacted in 1996, states, “The state may not unfairly discriminate directly or indirectly against anyone on one or more grounds, including...disability”. The constitution further states that every person, including adults, has the right to a basic education and the right “to further education, which the state, through reasonable measures, make progressively available and accessible”. The South African Schools Act (1996) further strengthens the rights of disabled children to educational opportunities by recognizing sign language as an official language, requiring schools be accessible to disabled children and requiring schools to support for disabled children.

In terms of policy, two major strategies regarding the education of disabled children were developed after 1996. In 1997, the government commissioned and adopted the “White Paper Integrated National Disability Strategy” (INDS), which marked the shift in government thinking towards a social model of disability versus the previous medical model. This strategy laid the basis for national inclusive development policy as it established guidelines towards ending discriminatory practices in programs and services like education. All government departments are required to implement disability policies and strategies that match the guidelines set out in the INDS.

The most significant inclusive education policy is the “White Paper 6: Special Needs Education, building on inclusive education and training system”, which was published by the Department of Education in 2001. Most importantly, the White Paper clearly defines what inclusive education means for the country and outlines six key strategies the country plans to implement in regards to incorporating disabled children into mainstream schools. These strategies include designating 500 out of the country’s
20,000 primary schools to be full-service schools and launching a national advocacy and public education campaign to spread the message of the inclusion model.\textsuperscript{78}

Finally, and probably most importantly, South Africa has established a system of structures responsible for translating policies into practice at the local level and monitoring. There is a Joint Monitoring Committee on the Improvement of Quality of Life and Status of Youth, Children and Disabled Persons, which is an independent body responsible for monitoring the government’s progress on following through with its inclusive strategies.\textsuperscript{79} Every province in the country is responsible for creating an Office on the status of Disabled Persons, an Office on the Rights of the Child and a Standing Committee that monitors the implementation of government strategies at the local level.\textsuperscript{80} Finally, the country’s Human Rights Commission has the authority to tackle specific violations of disabled children’s rights.\textsuperscript{81}

**INDIA**

<table>
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<tr>
<th>D. Inclusive Curricula</th>
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<tr>
<td>D.2 Implement curriculum changes that support flexible learning and assessment</td>
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<tr>
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<td>D.4 Encourage the participation of all stakeholders in the curriculum design process</td>
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</table>

India, like South Africa, has legal and policy frameworks that support inclusive education. The country’s Persons with Disability Act (1995) was the first act to acknowledge that all levels of government have a responsibility to ensure that disabled children under the age of 18 had access to free education. The Right of Children to Free
and Compulsory Education Act (2009) firmly puts inclusive education inside of a rights-based legal framework. Additionally, the government adopted the National Policy for Persons with Disabilities, issued by the Ministry of Social Justice and Empowerment, in 2005. Unlike South Africa, India has moved towards the implementation of strategies that seek to morph the country’s educational system through decentralization, professional development support and an expansion of choice so that it fits every child’s needs.

The Government of India structures its economic development strategies by developing five-year plans. The Tenth Five-Year Plan (2002-2007) yielded a record average economic growth of 7.7 percent\(^2\), which of course is a positive event for a country that for decades had been crippled by poverty. Nevertheless, the government recognized that economic growth does little good if marginalized groups are not given opportunities for economic and social mobility. Therefore, during the Tenth Plan, the government chose to increase attention to universalizing elementary education. More specifically, the government planned to work on access, enrollment, retention, achievement and equity.\(^3\) To achieve the goal of universal education, a variety of programs were created. The two programs most relevant to disabled children are District Primary Education Programme (DPEP) and Sarva Shiksha Abhiyan (SSA).

In 1994, the government, supported by the World Bank, launched DPEP, a decentralized program that initially only focused on preventing dropouts through building schools in villages, providing teacher training and empowering women and girls.\(^4\) This program marked the first time that district primary schools would be held accountable for educating all children in the country, although, DPEP did not began to focus on
integrating children with a full range of disabilities into mainstream schools until two years after its inception.\textsuperscript{85}

Since its inception, DPEP has been implemented in 15 states across India. Components of the program included providing district-level academic and technical support, distributing educational aids and appliances, identifying disabled children early and extensively training teachers in-service. Teachers received this training through the District Institute of Education and Training and the State Council of Educational Research and Training. By 2003, over 1.1 million teachers had taken training courses in the participating states.\textsuperscript{86} Furthermore, Cluster Resource Centers were created to serve schools in a 10km area by giving teachers the opportunity to share information on best practices and ideas with each other.\textsuperscript{87}

Sarva Shiksha Abhiyan (SSA) was initiated in 2000 with the goal of achieving universal primary education by 2007 and universal elementary education, primary and upper primary, by 2010. While its predecessor eventually incorporate the education of the disabled into its mission, SSA focused on including children with special needs and other marginalized groups from the very beginning. Additionally, SSA’s policymakers added on to the model established by DPEP by creating a multi-option model that gives each of India’s states the flexibility to implement the program as appropriate. In other words, every state is required to get more children with disabilities enrolled in school and provide them with the needed skills, but each state has the authority to decide exactly what appropriate learning environment should be offered to each child.\textsuperscript{88}

For example, children with severe-profound disabilities are unable to enter mainstream schools immediately. Therefore, states that are implementing SSA are
required to provide home-based education to these children in order to either prepare them for schools or providing them with basic living skills.\textsuperscript{89} Each state can decide to provide this service through either government appointed volunteers, NGOs or special schools turned into resource centers.\textsuperscript{90} Children with disabilities are given a wealth of different educational options including receiving education through open learning system and open schools, alternative schooling and distance education.

What is the result of India’s above inclusive education strategies? By the end of 2003, DPEP had helped to identify 877,000 disabled children and enrolled 621,760, or over 70 percent, of those children.\textsuperscript{91} Since the initiation of SSA, 3,042,000 children have been identified as disabled and 2,595,000, or 85.33 percent of all disabled children, have been enrolled.\textsuperscript{92} In terms of literacy, 55 percent of PWDs were literate in 2008, which are actually much better rates than those of the Scheduled Castes and Scheduled Tribes communities.\textsuperscript{93}

While India’s inclusive education program incorporates almost all of the components of this paper’s inclusive education criteria, it is not perfect. The government has not identified and covered all of the disabled children in the country\textsuperscript{94} and many schools are still inaccessible.\textsuperscript{95 96} Furthermore, children with milder disabilities fare better under the existing system than children with intellectual and physical disabilities, and teachers are still underprepared to handle ability-diverse classes.\textsuperscript{97} Finally, there appears to be an efficiency problem, as individual states and districts are concurrently running several initiatives that have the same objective and strategies.
**UNITED STATES**

### D. Inclusive Curricula

- D.2 Implement curriculum changes that support flexible learning and assessment
- D.4 Encourage the participation of all stakeholders in the curriculum design process

### E. Teacher and School Administrator Support

- E.3 Provide them with training in techniques such as differentiated instruction and cooperative learning
- E.4 Facilitate information sharing on best practices and new techniques between teachers and administrators
- E.5 Create school-based support teams

### F. Community & Parental Involvement

- F.1 Empower parents and involve the community by supporting civil society organizations

### G. Monitoring & Accountability

- G.1 Establish mechanisms to track school participation and quality

The US has fully embraced an underlying concept of inclusive education, which is a combination of a strong vertical approach in terms of non-discriminatory policies and laws at the national level and a strong horizontal approach in the form of full stakeholder involvement on a school-by-school basis. Over the last three decades, both countries have shifted away from special education accountability focused on procedural compliance towards one focused on results achieved. These changes are illustrated by
the passage of No Child Left Behind (2001) and Individuals with Disabilities Education Act (2004) in the US. No Child Left Behind or NCLB requires all public schools receiving federal funding to administer annual standardized tests to students in certain grades to determine if the schools have taught their students well. The law further stipulates that all children in public schools should be considered general education students.

At the same time, these schools must uphold the Individuals with Disabilities Education Act or IDEA, which states public schools must educate students with disabilities even if the child is incapable of benefiting from educational services. If a child is found to qualify as disabled as defined by IDEA, then the school must create an Individualized Education Plan (IEP) that modifies the curriculum to fit the child’s specific needs and that only pulls the child out of the mainstream classroom as a last resort.

At first glance, these laws appear to present a real problem for schools attempting to make classroom inclusive while also following legal mandates to increase schools’ total achievement level. However, in both countries a solution was adopted called the Comprehensive School Reform (CSR), or Whole-School Reform.

The CSR Program actually began in 1998 in the United States after FY1998 Labor-HHS Education Appropriations Act was passed. Actually, CSR was reauthorized when NCLB was signed into law. In order for a school to receive a portion of the federal funds allocated to CSR, they must design a CSR program that incorporates eleven components. These components are:

- Scientifically-based methods and strategies;
• A comprehensive design that integrates instruction, assessment, classroom management, school management and parental involvement;

• High-quality and continuous teacher and staff development;

• Measureable goals and benchmarks that are preferably linked to the respective state’s Adequate Yearly Progress (AYP);

• A demonstrable show of support from teachers, principals, administrators and other school staff;

• Support for teachers and principals;

• Meaningful and sustained involvement of parents and the community;

• Consultation from an external expert on school-wide reform who provides high-quality support and assistance;

• Implementation of annual evaluations to ensure accountability;

• Coordination of resources coming from Federal, State, local and private sources;

• And, the program must have a proven track record of improving students’ academic achievement.98

If these components look familiar, they should. They are nearly identical to international inclusive education guidelines list earlier. The difference is that instead of focusing on evaluating national policy, the emphasis is on creating an inclusive microcosm within a school and surrounding community in order to harness all available resources to ensure every child meets a pre-determined goal.
V. Recommendations Based on Case Studies

1. Commission a study to assess the causes behind the low school enrollment of children with disabilities.

Absolutely nothing in regards to increasing the school enrollment of the disabled can be accomplished without first knowing why they are not going to school. Tanzania has leap-frogged over this step and has begun developing strategies that, while might be international best practices, might not actually solve the problem. For example, if Tanzania does a study that proves districts are still allowing schools to illegally charge students fees and that this additional cost is discouraging parents from enrolling their disabled children in school, then Tanzania’s inclusive policy must incorporate stronger fee abolishment enforcement mechanisms or the provision of education vouchers. Or, if disabled children are being actively discriminated in schools and this prevents them from enrolling, then Tanzania should focus on creating a strong sensitizing campaign that takes the stigma away from disability.

Research and data collection should not just stop at the policymaking stage. Instead, the practice should be ongoing to assess the ever-changing social and environmental conditions that cause and exasperate the condition of disability and social exclusion. In short, effective strategies and implementation must be the product of careful and continuous data collection and analysis.

2. Develop a concrete, nationally recognized definition of inclusive education

According to the Tanzania’s 2010 Disability Act, an inclusive school is, “a place where barriers have been removed to enable students with disabilities to learn and
participate effectively within the general school system”. This definition, while correct, is not specific enough to fully distinguish a school that is simply practicing integration from a school that is practicing inclusion. South Africa’s White Paper Number 6 actually has a table that compares mainstreaming or integration from inclusion so that there can be little doubt about what the government means when it is discussing inclusion. A concrete definition ensures uniformity and accountability and widely publicizes the concept.

3. *Integrate inclusive education priorities into existing educational programs in order to form one cohesive inclusive education strategy*

   Tanzania actually does have existing programs that are perfect foundations to build an inclusive education system. For instance, the country has already adopted the whole-school approach by initiating its Whole School Development Programme (WSDP) in 1998. This program involves school committees, head teachers, staff members and parents collaborating on individual school plans. During these planning session, participants are suppose to define the school’s mission, formulate long-term and short-term goals and objectives, review curricular and organizational areas and prioritize them and establish internal and external communication networks. Additionally, the government already has an alternative, non-formal education program, Comprehensive Basic Education in Tanzania (COBET), which is a program designed to integrate out-of-school children back into the primary school system. However, these programs are seen as separate from inclusive education and nowhere in the documents pertaining to these programs is the education of disabled children mentioned. In fact, in the PEDP II, inclusive education is listed as an entirely distinct program.
Tanzania should instead look to India and the United States as models. As seen in the previous sections, all three of these countries viewed inclusive education as a mechanism to unify the entire educational system under the one goal of providing education for all. In fact, seamlessly melding special education with mainstream education is the entire point of the model. Additionally, because so many of the barriers to education stem from the household, a CSR model that attempts to engage both the parents and the community in curriculum development and school planning might create a bridge for disabled children.

4. Give District Councils more control and flexibility to implement inclusive education strategies

Tanzania is currently in the process of implementing its Local Government Reform Programme, which has the goal of shifting service delivery, including education service delivery, authority from the central government to local government committees. According to Tanzania’s PEDP II (2007-2011), “Delivery of pre-primary and primary education is compliant to the principle of decentralization by devolution. Implementation of most of PEDP II activities are vested with the Local Government and their relevant lower organs”. As mentioned earlier, this document outlines the country’s inclusive education strategy, and so, is the responsibility of local government to turn from policy to practice. Unfortunately, unlike India, Tanzania has failed to fully allow local governments to have control over how national government education policies are translated. The power to make decisions on education is supposed to rest with the District Councils, which manage funds and endorse district education plans. However, a study found that the central government has the authority to control the recruitment and deployment of education staff. Additionally, the government approved formula-based
education resource transfers to local governments have not been applied, which has resulted in some districts only receiving a quarter of the resources they are entitled to according to the formula.\textsuperscript{104}

The merits of decentralization in general have been written about in numerous publications; however, in terms of building an inclusive education system, decentralization is imperative in order to ensure that disabled children’s individual needs are adequately and appropriately met. Local governments have a greater capacity to determine what aspects of inclusive education in their areas need the most improvement and the most resources and to be more responsive to those needs. For instance, one district might have a number of schools that simply need renovating to be more accessible for disabled children while another district might need to build more schools to accommodate the same population. Therefore, it is necessary that Tanzania’s government uphold its commitment to education service delivery decentralization.

5. \textit{Introduce greater accountability into all levels of the educational system}

Compared to South Africa’s legal and regulatory institutions, it is still relatively weak. First, government officials who are responsible for implementing inclusive strategies have positions on the Council, which is tasked with monitoring the government’s implementation of these strategies. Even though civil society organizations will also be a part of the Council, there is still a huge conflict of interest with this arrangement. A better strategy would be to follow South Africa’s model of having an independent monitoring committee to ensure the legitimacy of any report
emanating from the body. The District Council Committees appear to have a greater number of representatives from the disabled community and the larger community.

Another criticism of the Disability Law is that there are very few provisions created that allow individual disabled persons or their caretakers to submit individual complaints to a body that will handle them appropriately. Part of the reason why the disabled have been marginalized so long is that the government was not responsive to their very specific needs and rights. Allowing civil society organizations devoted to disability advocacy to be a part of the National Council is definitely important; however, these organizations do not necessarily speak for all of the disabled. Every individual should have the chance to hold all public and private institutions and individuals accountable for upholding their right to equitable and inclusive education.

8 Ibid, p. 2.
10 WHO (1980).
11 Ibid.
12 Ibid.
60 Ibid.
63 Ibid, p. 35.
67 Howell, p. 112.
69 Ibid.
70 Ibid, p. 7.
71 Ibid.
72 Howell, p. 110.
77 Ibid.
80 Ibid, p. 11.
81 Ibid.
83 Ibid, p. 18.
85 Ibid.
88 Government of India. “Overview of Inclusive Education in SSA”. p. 3.
89 Ibid.
90 Ibid.
92 “Overview of Inclusive Education in SSA”, p. 4.
94 “Overview of Inclusive Education in SSA”, p. 4.
95 Ibid.
96 Department of Higher Education, p. 65.
97 Ibid, p. 66.
Disability Act 2010, Section 3.


Ibid.


Ibid, p. 11.
Bibliography


Government of India. “Overview of Inclusive Education in SSA”.


Appendix A

Tanzania’s Inclusive Education Strategy from Tanzania’s the Primary Education Development Programme II (2001-2012)

Strategies

- Ensure identification of children with special educational needs;
- Sensitize communities and teachers to understand the importance of educating children with special educational needs especially girls as a strategy for reducing vulnerability to exclusion, neglect and abuse;
- Prepare a Code of Conduct for Special Needs defining roles of different stakeholders, e.g. teachers, parents, community, different professionals in identification, assessment, referral, care and support, developing Individualised Education Plans (IEPs), collaborative planning and teaching;
- Develop clear Terms of Reference (ToR) for teachers specially trained in special needs with a focus on working with regular classroom teachers;
- Monitor attendance and performance of male and female pupils with special education needs;
- Ensure adequate availability of appropriate equipment and teaching and learning materials;
- Improve school infrastructure by making them friendly to pupils with disabilities;
- Develop an Index of Inclusive Education for Tanzania;
- Empower schools to plan for inclusion through the whole development planning process; and
- Promote roles of the existing special schools and units to become specialized centres for supporting regular schools in their catchment areas.
### Appendix B

**Inclusive Education Criteria**

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<td>A.4 Sign international conventions or declarations concerning the rights of the disabled</td>
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<td>A.5 Provide sustainable forms of funding for inclusive education that is equitable,</td>
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<tr>
<td>transparent, accountable and efficient</td>
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<tr>
<td>B. Attitudinal Change &amp; Policy Development</td>
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<tr>
<td>B.1 Create a formal national program on inclusive education with definitions,</td>
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<tr>
<td>standards and evaluation systems</td>
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<tr>
<td>B.2 Ensure that one school system is responsible for the education of all children in</td>
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<td>their region</td>
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<td>B.3 Make sure the Ministry of Education is responsible for the provision of all education</td>
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<td>B.4 Initiate a public education campaign to inform society about the importance of</td>
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<tr>
<td>inclusive education</td>
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<tr>
<td>C. Investing in Early Childhood Inclusion</td>
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<tr>
<td>C.1 Develop a national early childhood and education policy</td>
</tr>
<tr>
<td>C.2 Include priority in national budgets, sector plans and poverty reduction strategy</td>
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<td>papers</td>
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### D. Inclusive Curricula

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<tr>
<td><strong>D.1</strong></td>
<td>Craft grade level curricula so that there is a smooth transition between early childhood, primary and secondary education in order to prevent drop-outs</td>
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<tr>
<td><strong>D.2</strong></td>
<td>Implement curriculum changes that support flexible learning and assessment</td>
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<tr>
<td><strong>D.3</strong></td>
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<td><strong>E.1</strong></td>
<td>Train teachers before entering the classroom and in-service in order to given the capacity to make their classrooms more inclusive</td>
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<tr>
<td><strong>E.2</strong></td>
<td>Train all educational professionals</td>
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<tr>
<td><strong>E.3</strong></td>
<td>Provide them with training in techniques such as differentiated instruction and cooperative learning</td>
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<td><strong>E.4</strong></td>
<td>Facilitate information sharing on best practices and new techniques between teachers and administrators</td>
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<td><strong>E.5</strong></td>
<td>Create school-based support teams</td>
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<tr>
<td><strong>E.6</strong></td>
<td>Reduce class size, increase salaries and make buildings and educational materials accessible</td>
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### F. Community & Parental Involvement

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<td><strong>F.1</strong></td>
<td>Empower parents and involve the community by supporting civil society organizations</td>
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<tr>
<td><strong>F.2</strong></td>
<td>Train special education teachers so that they are resources to mainstream teachers</td>
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### G. Monitoring & Accountability

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<tr>
<td><strong>G.1</strong></td>
<td>Establish mechanisms to track school participation and quality</td>
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