STEP-UP ZAMBIA:
INCREASING LITERACY RATES THROUGH EFFECTIVE POLICY IMPLEMENTATION

PREPARED FOR CHEMONICS INTERNATIONAL

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DISCLAIMER:

The authors conducted this study as part of their education at the University of Virginia. This report is submitted in partial fulfillment of the course requirements for the Master of Public Policy program. The judgments and conclusions are solely those of the authors, and are not necessarily endorsed by the Batten School of Leadership and Public Policy, by the University of Virginia, or by any other agency.

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Acronyms

CETF	Community Education Task Force
DEBS	District Education Board Secretary
DECC	District Education Coordinating Committee
DEMC	District Education Management Committee
GRZ	Government of the Republic of Zambia
MESVT	Ministry of Education, Science, and Vocational Training
NEBS	National Education Board Secretary
NIF	National Implementation Framework
PECC	Provincial Education Coordinating Committee
PEMC	Provincial Education Management Committee
PEO	Provincial Education Office
PTA	Parent Teacher Association
SMIT	Senior Management Implementation Team
ZECF	Zambia Education Curriculum Framework
ZIC	Zonal In-Service Coordinator
ZRC	Zonal Resource Center
ZCS	Zonal Center School

Executive Summary

The Zambian Ministry of Education, Science, and Vocational Training (MESVT) determined that there is "very little teaching and learning going on in schools" in Zambia.[1] To address this problem, the MESVT introduced a new education policy in January 2014, the Zambian Education Curriculum Framework (ZECF) that included a new language of instruction policy. This mandated that basic school instruction and literacy lessons take place in local language until Grade 5, when the language of instruction will transition to English. The goal of this policy is to improve literacy levels and the overall quality of education in Zambia.

The Zambian government is facing significant challenges in implementing the new policy, specifically the language of instruction directive. These challenges include a lack of resources and human capacity, low community and teacher awareness level and commitment to education, poor accountability, and a lack of robust monitoring and evaluation. Cultural factors are also creating implementation barriers, with many parents, teachers, and political leaders expressing concern over the use of local language in schools instead of English. If the implementation challenges are not overcome, the government will not be able to realize its education policy objectives.

USAID has contracted Chemonics International to offer strategic guidance on the implementation of this policy. Our role in this consultative process is to work with the Chemonics Step-Up Zambia project to examine the change in language of instruction in relation to the overall education policy goals of the MSEVT and to analyze the most effective options for successful implementation. Our analysis considered four policy alternatives: maintaining the status quo, centralizing and standardizing the curriculum, redesigning the teacher deployment system, and decentralizing implementation to the district level. Based upon our analysis of best practices and interviews with various stakeholders, we recommend an implementation strategy that combines the decentralization and teacher deployment alternatives. We believe that decentralization in combination with teacher and community empowerment will lead to increased commitment and accountability throughout the education system. These changes have the potential to generate improvements in student learning, increase literacy levels, and result in an overall higher quality of education in Zambia.

[1] Chemonics International (2012). Understanding the System: Step-Up Zambia's Approach to Improving Learner Performance by Experiencing, Scrutinizing, and Evaluating the Realities on the Ground.

Background

Zambia is a landlocked country of 14.6 million people located in Sub-Saharan Africa.[2] Zambia is made up of ten provinces: Central, Copperbelt, Eastern, Luapula, Lusaka, Muchinga, Northern, Northwestern, Southern, and Western. The provinces vary considerably in size, wealth, and population. The ruling Patriotic Front government, led by President Michael Sata, is promoting the decentralization of authority in an attempt to bring the government closer to the people. Each province is comprised of individual districts, each of which has one district center, or *boma*, where district government offices are located. The majority of local governance and decision-making is conducted at the district level, often in conjunction with traditional leadership including headmen and chiefs.

The population of Zambia is made up of more than seventy tribes all of which have their own languages, customs, and traditions. The most commonly spoken tribal languages are Bemba (33.4%), Nyanja (14.7%), Tonga (11.4%), Chewa (4.5%), Lozi (5.5%), and Nsenga (2.9%)[3].

Figure 1: Languages of Zambia

However, there are over seventy languages in existence in Zambia today and the majority of Zambians are multi-lingual. Despite the country's tribal diversity, there is a strong sense of Zambian identity. Intermarriage is common and the mobility of the population, especially among government workers, means that many people live hundreds of kilometers from the traditional

[2] The World Factbook: Zambia. (n.d.). Central Intelligence Agency. Retrieved April 17, 2014, from https://www.cia.gov/library/publications/the-world-factbook/geos/za.html
[3] The World Factbook: Zambia

tribal areas. The practice of sending government workers, especially teachers, to live and work in other areas of the country is common. As a result of this transience, there is virtually no tribal violence in Zambia today.

Despite its peaceful nature, Zambia faces challenges in many areas, including health, economic diversification, gender equality, and HIV. The education system is under particular strain for several reasons. Poverty is endemic with 60.5% of the population living under the national poverty line.[4] The economic situation severely limits the amount of funding and resources the government can devote to education. Additionally, the Zambian population has a large proportion of youth with 46.2% of the population under the age of 14.[5] This can be party attributed to the HIV epidemic which resulted in the deaths of much of the older population. The HIV epidemic was particular virulent among the teaching population in the early 2000's and the education system is just now beginning to recover from its effects.

Though the current government is working to decentralize, the MESVT operates within a hierarchical and extremely bureaucratic structure (see figure below).

From its national headquarters in Lusaka, the MESVT's supervises the ten Provincial Education Offices (PEOs). Under the PEOs are the District Education Boards (DEBS) who are in charge of programming implementation as well as monitoring and evaluation at the district level. The DEBS oversees education in their given district's zones through the Zonal In-service Coordinators (ZICs) who are based at the largest school in each zone and are responsible for conducting teacher trainings at the local level and ensuring compliance by all the schools located in a particular zone. The success or failure of the structure is heavily depend upon the motivation and commitment of the operators who are working within it.

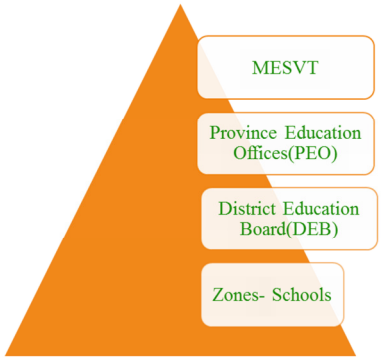


Figure 2: MESVT Hierarchy

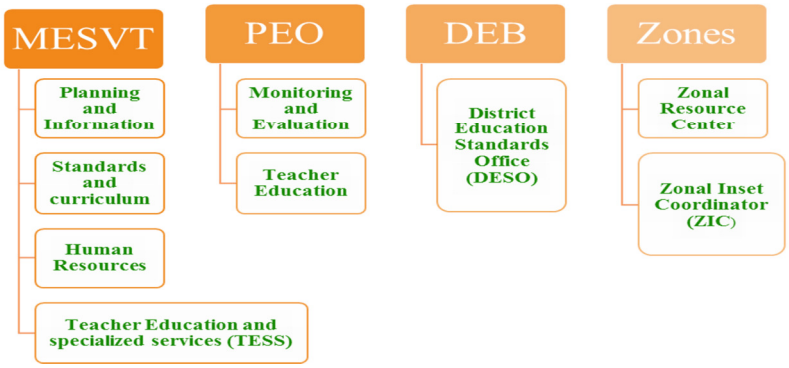


Figure 3: MESVT Roles and Responsibilities

[4] Zambia. (n.d.). The World Bank. Retrieved April 17, 2014, from http://data.worldbank.org/country/zambia
[5] The World Factbook: Zambia

The Zambian school system is made up of several levels of education. Basic school includes Grades 1 through 7 and secondary school is classified as Grades 8 through 12. There are far more basic schools in the country than secondary schools as school attendance drops off sharply after Grade 7 when students must pass national exams and begin paying school fees in order to continue their education. There are two types of public schools operating in the country. These are government (GRZ) schools and community schools. Government schools are officially recognized, staffed, and funded by the Zambian government. In order to work at a government school, teachers must be trained and in possession of a teaching certificate or degree. Community schools are small, local schools that are run by volunteer teachers who receive no government salary but who are not required to be certified; though the majority has completed at least Grade 9. These volunteer teachers often receive in-kind compensation from communities and parents for their work.

The Chemonics USAID Step-Up project seeks to improve the quality of education in Zambia with a particular focus on GRZ schools. Within this project is a specific focus on improving literacy at the basic school level which includes Grades 1-7. In their baseline survey, Step-Up found that less than 50% of students in Grades 1-4 can read and write.[6] Youth literacy levels in Zambia were at 61.4% in 2007 and are expected to rise to 63.4% by 2015.[7] The Examinations Council of Zambia conducts national testing for students in Grades 7, 9, and 12. In 2013, 89.36% of students passed the Grade 7 exam.[8] Only 31.7% of students passed the Grade 9 exams though 60.21% passed the Grade 12 exam to complete high school.[9] The Zambian government tests all pupils in English with one of the seven official local languages as subjects. The local languages used in the Zambian education system are displayed on the map below.

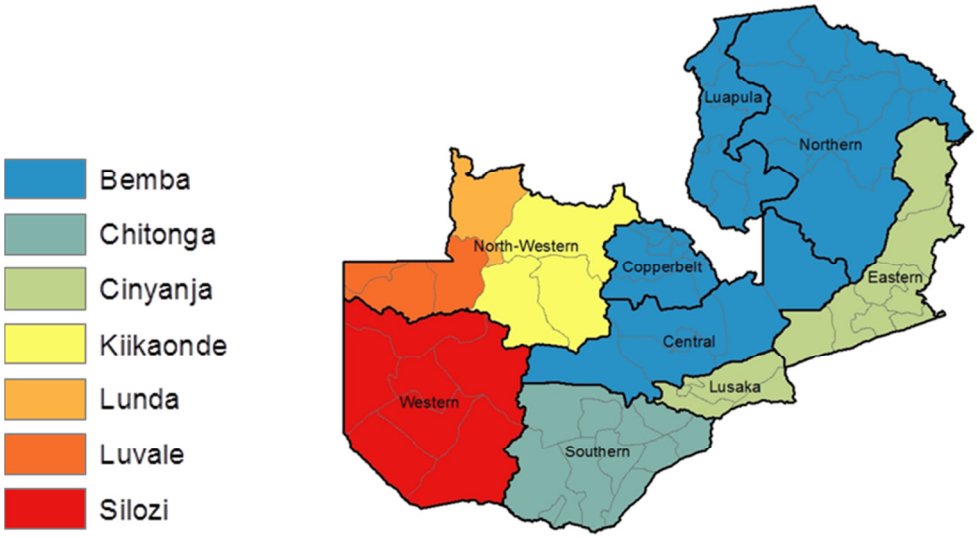


Figure 4: Zambian Languages of Instruction

[6] Chemonics International (2012)
[7] UNESCO Institute for Statistics. (2013). Adult and Youth Literacy.
[8] Zambia: 2013 G7 Results Good. (2013). All Africa.
[9] Grade 12 Pass Rate Up. (2014). The Lusaka Voice.

Problem Definition

In January 2014, the Zambian Ministry of Education, Science, Technology, and Vocational Training (MESVT) introduced a new policy, the Zambia Education Curriculum Framework (ZECF). The intended goal of this policy is to improve the literacy levels and gains in student learning across the Zambian education system by teaching children literacy in their own local languages. This policy mandates that all classes must be taught in a local language until Grade 5 when English will become the primary mode of instruction with the local language taught as a subject class. Prior to the policy change, local language was used for Grade 1 instruction with English introduced as the primary language of instruction in Grade 2.The goal of this policy change is to improve literacy rates in local language in early grades in order to ensure that children are able to read and write before introducing them to the English language. The MESVT believes that this will lead to a higher quality of education throughout the school system and long-term economic and development gains for the nation as a whole.

However, there are challenges in implementing the language of instruction change. The most serious challenges are limited resources and human capacity, low awareness levels, lack of commitment, poor accountability within the education system, and non-existent feedback mechanisms. These five challenges in combination with underlying cultural factors create implementation gaps that are hindering policy implementation and preventing improvements in education. The ideal implementation framework will account for and address all of these issues.

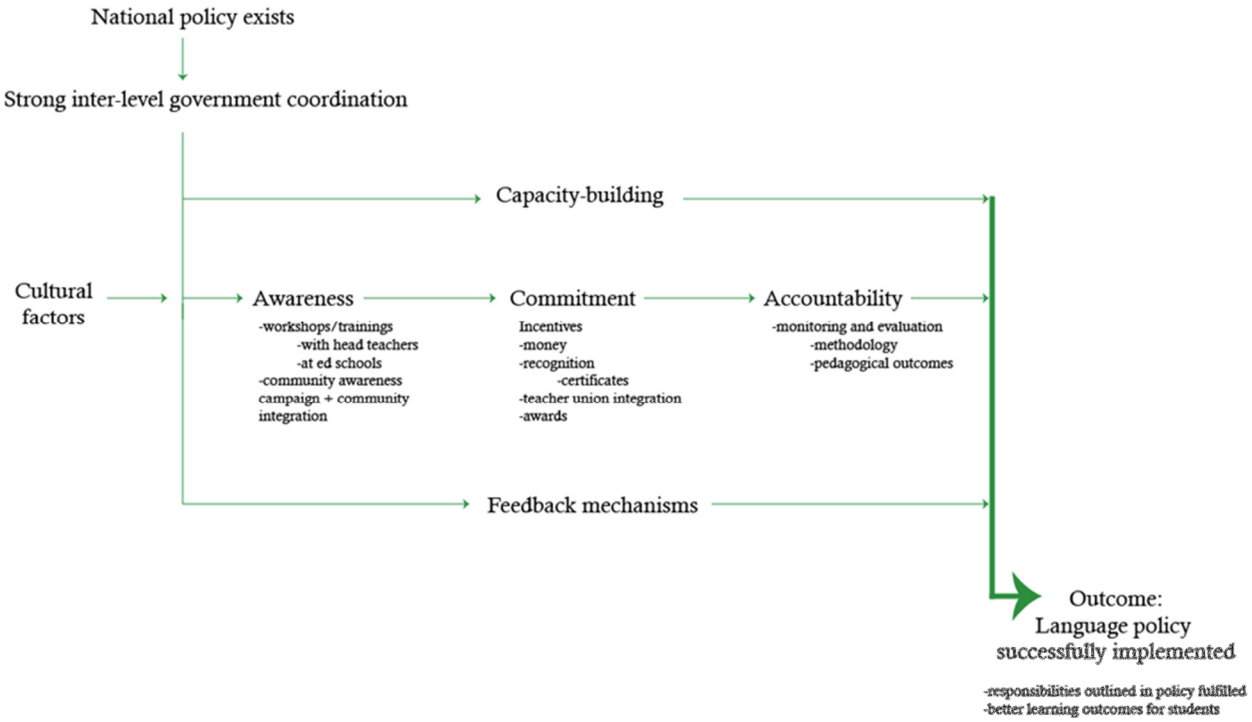


Figure 5: Ideal Implementation Framework

Major Challenges for Policy Implementation

This analysis will focus on bridging gaps by addressing the challenges outlined above in order to achieve successful policy implementation, improve literacy levels, and ultimately increase overall standards of education in Zambia.

Lack of capacity is a consequence of both limited resources and inadequate planning. Although the Zambian government has put significant effort into developing education-related infrastructure, schools still lack adequate teachers and materials. An interview with Dan Hanks of the USAID's *Time to Learn* literacy initiative in Zambia revealed that there is a severe shortage of pedagogical materials in schools, especially materials in local languages. Although some new textbooks have been developed, these are limited to Grade 1; furthermore, these texts have not been widely disseminated. The 2011 SACMEQ report emphasizes this shortage, noting that Zambia ranks poorly compared to other African countries in regard to adequate textbooks and basic learning materials. Compounding the issue is the fact that there is currently no mechanism in place to train teachers in the pedagogy of teaching in local language. The MESVT does not have a teacher training program in place for this development.

Awareness levels are low and are exacerbated by inadequate teacher training. A recent UNESCO report on education outlines this lack of awareness as a general trend in African education systems where, "teachers [are expected] to carry out new initiatives in which they had neither been consulted nor are conversant with. This creates a feeling of ignorance …and also presents many obstacles in the implementation of new plans." [10] Zambian teachers have been teaching in English since independence and have little guidance in regard to best practices for changing over to local languages. Additionally, the general public, especially in the rural areas, is not aware of the policy change and thus does not have a chance to voice its concerns and ensure the most beneficial outcomes for pupils.

Accountability is hindered by the lack of capacity in combination with low levels of awareness. Step-Up reported that limited resources prevent MESVT officers from carrying out comprehensive monitoring and evaluation and when it is conducted, it is heavily focused on meeting education infrastructure objectives rather than gains in student learning. One PEO office reported that there were only three standards officers to monitor 7,000 teachers.[11] Another factor that contributes to a lack of accountability is the incentive structure for teachers. Currently, there is no performance-based review system for promoting teachers; instead teachers are promoted on the basis of their academic qualifications - not their achievement of gains in student learning.

Feedback is extremely limited as the MESVT lacks an explicit mechanism for responding to reports. Step-Up notes that the DEBS receives reports but, "…the data in many of those reports cannot be trusted, because the people who develop the reports have no real understanding of the potential use of this data to improve their situations."[12] In Zambia's education system,

[10] UNESCO (2000). The EFA 2000 Assessment: Zambia.
[11] Chemonics (2012)
[12] Chemonics (2012)

decisions are still made at levels so remote to the school reality that in most cases they do not reflect the real needs schools. District offices feed data to the provincial office (which then feeds data to the MESVT headquarters), but analysis and decisions based on that data can take up to a year to return to the district.[13] As the real and immediate users of data, teachers and DEBS officials need to be able to make decisions based on more than their perceptions.

Cultural factors are exacerbating the existing implementation challenges. These include the sheer diversity of languages and the existing attitudes around the importance of education. Traditionally, communities have not taken an active interest in the education process; especially in the rural area where children are expected to assist with agricultural and domestic activities. In the urban area, there is strong stigma against learning local language in schools, especially among the country's elite population. Dan Hanks of *Time to Learn*, and Helen Nsunge De Jonghe of Peace Corps Zambia highlighted the rural and urban challenges surrounding education in their respective interviews. There is also on-going debate in the Zambian parliament over which languages should be taught in schools which seriously hinders the political feasibility and sustainability of the new policy.

Evidence and Best Practices

This analysis draws upon qualitative interviews with Zambian MESVT officials and education experts who work on literacy in multilingual countries. Interviews with the Chemonics Step-Up Zambia team who analyzed and conducted field research in Zambia provided context for the policy problems. An understanding of the current education system and its challenges was acquired through interviews with Zambian education administrators. The evidence used in this analysis was also supported by an interview with a Peace Corps volunteer who is working on the USAID *Time to Learn* literacy initiative in Zambia. This interview provided information about the barriers to effective implementation of the multilingual language of instruction policy in Zambian basic schools.

In order to assess the cost effectiveness criteria, the 2014 *MESVT Annual Work Plan and Budget* was utilized in combination with personal interviews to estimate the cost of each alternative. Chemonics International staff, USAID project staff, and education specialists working in Zambia were all interviewed in order to develop accurate cost estimates. The exchange rate used and a breakdown of specific costs are given in Appendix A: Cost Effectiveness Breakdown.

The policy options featured in this analysis were developed based on United Nations and McKinsey & Company research, programs, and reports. Best practice cases were selected from those countries facing similar multilingual policy implementation issues as Zambia in addition to those that successfully implemented such policies. This project assessed relevant best practices

[13] Chemonics (2012)

by examining the socioeconomic, cultural, and linguistic differences between Zambia and the best practice country. This analysis adapted these for a Zambian context by identifying and addressing the differences concerning capacity, stakeholders, and cultural barriers. This method of analysis ensures that the positive effects of the best practices can be realized in the Zambian context. By studying best practices, compiling first-hand accounts and expert opinions, and accounting for the Zambian context, this analysis seeks to recommend the best way forward for implementation of the new policy.

Criteria for Analysis

In order to effectively evaluate the alternatives, we identified a series of criteria based on best practices, research, and interviews. These six criteria are gains in student learning, cost effectiveness, political feasibility, capacity, sustainability, and timeframe.

Gains in Student Learning

The MESTV's primary motivation was to improve student learning outcomes, particularly at the basic education level. Therefore, gains in student learning are key criteria for assessment. Quality of education will be measured by improvement in national literacy assessment test scores, as provided by the Southern African Consortium for Monitoring Education Quality (SACMEQ). SACMEQ provides statistics on the percentage of Grade 6 students attaining basic reading competency. Currently, this statistic is at 28.6%. We define gains in student learning as an increase in the percentage of Grade 6 Zambian students achieving the basic reading competency.

Explanation of rankings

1. High - 50% of Grade 6 pupils at level 3: Basic Reading
2. Medium - 40% of Grade 6 pupils at level 3: Basic Reading
3. Low - 30% of Grade 6 pupils at level 3: Basic Reading

Cost Effectiveness

This criterion refers to the need for evaluation of the alternatives in light of the given MESVT budget. For 2014, MESVT allocated K 8,610,000,000 or approximately $1,400,393,517, which is 20.2 % of the Ministry's total budget. Of that allocation, 42.8% or K 3,492,000,000 has been directed to the basic school budget. Although, this increased budget is beneficial, it still provides for a limited amount of resources, so cost-effectiveness of the policy options is an integral consideration. We conducted qualitative interviews of MOESVT officials,

Chemonics and other Zambian education experts to identify and evaluate the costs of various programs involved in implementing the policy alternatives.

Based on the available funding we will prioritize spending by assessing the costs of alternatives such as teacher training, infrastructure, resources, community focus groups, incentives, administrative costs etc. in light of their prospective benefits. The Ministry has set a target literacy rate of 68%.[14] In order evaluate cost-effectiveness we calculate the costs of projected resource needs that each alternative will require in order to achieve this literacy rate. Thus, the cost-effectiveness ratio is:

$$\frac{\boldsymbol{literacy\ rate}\ (\mathbf{68\%})}{\boldsymbol{cost\ of\ alternative}}$$

Given that the numerator is fixed at the goal literacy rate of 68%, the smaller the ratio, the less cost-effective the policy.

Percentage of Pupils Reaching Various Reading Competency Levels by Region (SACMEQ III)

	Level 1		Level 2		Level 3		Level 4		Level 5		Level 6		Level 7		Level 8	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	16.4	2.47	26.4	4.62	21.5	3.73	18.1	3.50	5.4	1.86	6.7	2.16	4.1	2.47	1.5	1.46
Copperbelt	18.2	1.76	24.8	2.70	27.3	2.01	14.8	2.17	6.9	1.46	5.4	1.33	2.4	1.22	0.3	0.20
Eastern	13.7	1.82	26.0	3.89	32.7	2.80	17.5	2.32	5.3	1.90	3.4	1.93	1.4	0.67	0.0	0.00
Luapula	16.1	2.43	31.8	3.23	28.2	3.49	16.2	2.69	6.0	1.36	1.0	0.53	0.3	0.28	0.5	0.50
Lusaka	11.7	2.73	24.9	2.46	26.4	4.35	13.8	2.17	9.4	2.05	8.5	2.08	3.4	1.75	1.9	0.92
Northern	11.0	2.62	26.9	3.37	36.3	3.75	17.4	2.54	5.6	2.85	0.0	0.00	2.9	2.61	0.0	0.00
North Western	17.6	3.31	36.1	3.65	27.7	2.57	11.9	2.69	4.8	1.51	1.6	0.77	0.3	0.28	0.0	0.00
Southern	20.8	2.87	35.6	3.53	27.4	3.03	9.7	1.58	3.8	1.58	1.7	0.96	0.9	0.46	0.0	0.00
Western	15.7	1.95	28.1	2.24	30.8	3.03	12.4	1.83	5.8	1.23	3.5	1.47	2.6	1.98	1.0	0.98
Central	16.4	2.47	26.4	4.62	21.5	3.73	18.1	3.50	5.4	1.86	6.7	2.16	4.1	2.47	1.5	1.46
Zambia	**15.8**	**0.84**	**28.3**	**1.19**	**28.6**	**1.12**	**14.9**	**0.86**	**6.0**	**0.66**	**3.7**	**0.50**	**2.2**	**0.58**	**0.5**	**0.23**

Figure 6: Pupil Reading Scores by Area.

Political Feasibility

Political feasibility is essential for effective policy analysis. Even if a policy alternative offers the best solution as evaluated by all other criteria, implementation will remain elusive unless key stakeholders support the policy. Political feasibility assesses the likelihood that a policy will be adopted in light of the existing political climate. Support by governmental stakeholders including government leaders, political parties, and ministries, as well as the backing of non-governmental organizations, teachers, parents, students and community members, is at the core of this criteria. Cultural acceptance of a given alternative must also be assessed and evaluated when looking at political feasibility. A successful policy will fit seamlessly within the existing cultural climate and will provide acceptable benefits to the public. Ergo, the three main levels we consider in assessing the political feasibility of a policy option are public approval, government support, and cultural acceptance.

[14] Republic of Zambia, Ministry of Education; NIF III 2011-2015.

Explanation of Rankings

1. High – Feasible on all levels
2. Medium – Feasible on two levels
3. Low – Feasible on one/no levels

Capacity

These criteria cover concerns about coordination, capacity, commitment, and accountability. Coordination includes the communication and collaboration throughout the various hierarchical levels. Commitment explores whether buy-in and incentivization exists at each level of implementation. Capacity examines whether the government (at the national or local levels) has the resources, especially budget, staff, and expertise, to implement the policy. Accountability includes monitoring and evaluation, as well as bilateral feedback to ensure successful implementation. \

Explanation of Rankings

1. High - 80-100 % of human capital and resource needs met
2. Medium - 60-79% of human capital and resource needs met
3. Low - below 60% of human capital and resource needs met

Sustainability

Sustainability criteria assess whether the proposed policy is sustainable in the long run, and considers resources, ownership, and resilience. Resources refer to whether the Zambian government has the resources, including budget, structure, and staff, to continue implementation of the policy once USAID funding ends. Ownership explores how much the policy lends itself to engaging Zambian government employees, teachers, and community members in supporting and advancing policy implementation. Resilience covers how well the policy is able to adapt to future education-related developments.

Explanation of Rankings:

1. High - policy allows for high level of flexibility in adapting to future developments and maintains high gains in student learning.
2. Medium - policy allows for moderate level of flexibility in adapting to future developments and maintains medium gains in student learning.
3. Low - policy has little flexibility in adapting to future developments and maintains low gains in student learning.

Timeframe

This criterion refers to the length of time necessary for substantial implementation by the MESVT and partner organizations.

Explanation of Rankings:

1. High: 0-7 years
2. Medium: 8-15 years
3. Low: 15+ years

Alternatives

Alternative 1: Let Present Trends Continue

In conjunction with the new education policy, the MESVT developed a National Implementation Framework (NIF) which seeks to increase investment in education and improve capacity by recruiting and additional 16,000 teachers. The intended outcomes in the NIF relevant to the language policy are: to improve the quality and relevance of education and skills training, to promote efficiency and cost effectiveness, and to enhance institutional coordination in both public and private education and training institutions. In order to achieve these goals, the ministry wants to ensure that all teachers have received initial training by 2015, that literacy scores in national assessment tests increase from 34.6% (in 2009) to 68% by 2015, that a strategic plan for decentralization and management is developed, and that regular assessment and monitoring is put in place.

However, there are serious sustainability issues associated with this alternative. For example, the recruitment of 16,000 people who successfully completed high school and can afford the higher education to become teachers is a challenging objective. Additionally, the MESVT is heavily dependent upon donor funding so their ability to provide teachers with incentives such as housing and regular salaries in the long-run is unclear. The MESVT has projected total required resources for basic education to be 3.5 billion Zambian Kwacha or 72.1% of total GRZ education expenditures. The NIF does not detail whether this projection will actually be met.

How it works:

The implementation guidelines leave decisions over literacy and teaching methodology to individual schools. Though the MESVT provides standard oversight, guidance, it does not provide instruction to individual schools on the best way to implement the new policy at the local level. While this freedom could lead to innovative grassroots solutions, current monitoring and evaluation systems are not sufficient enough to ensure quality across the country. The monitoring and evaluation role of the MESVT is clearly outlined in the NIF but the system is

very hierarchical, and feedback mechanisms to facilitate communication between various implementing levels are not in place.

Projected Outcomes:

Though the ministry sought to establish a framework to increase capacity, they did not account for the need to provide incentives, awareness, feedback mechanisms, or accountability measures within that system. As a result, it is unclear if zonal issues will be followed-up on and effectively addressed by MESVT officials. Additionally, this system has no measures in place to ensure community awareness and investment in education or to increase teacher commitment and school accountability. Without these very necessary aspects in place, it is unlikely that the current framework will achieve successful policy implementation. This implementation failure will result in challenges for achieving a higher literacy levels and in the long-run, could potentially reduce the overall quality of education in Zambia.

Alternative 2: Centralize and Standardize the Curriculum

This alternative takes the new language policy and puts provisions into place that will standardize the method of curriculum delivery and teaching methodology. This alternative calls for the MESVT's National Standards and Curriculum team to collaborate with stakeholders including UNESCO, USAID, and the Zambian Teachers Union to standardize a procedure for implementing the revised education curriculum and transitioning the language of instruction from English to local languages. This will align teachers with the Ministry's curriculum and will promote collaboration while decreasing the potential for future strikes. The new education curriculum was put in place in January 2014 and this alternative will standardize its implementation across the country. These centralized standards will promote pedagogical practices that focus on student-centered learning and require learner assessment at designated points from Grades 1-7. Furthermore, the MESVT should plan pilot programs to evaluate which medium of instruction is most successful and implement it throughout the country. The USAID Projects *Time to Learn* and *Read to Succeed* are already working on this and can be partnered with to facilitate effective implementation.

How it would work:

This alternative will take advantage of the hierarchical structure of the MESVT to aid implementation. The Provincial Education Offices (PEO) will act as liaisons between the MESVT's National (NEBS) and District Education Boards (DEBS). The PEOs will ensure implementation through stringent monitoring and evaluation across their respective provinces. These offices will conduct inspections and follow up with the DEBS about their respective progress while maintaining databases to share with MESVT headquarters. These inspections will be tied to teacher incentives to limit corruption and motivate teachers. The amount of incentives will be based on performance evaluations during which head teachers will assess teachers into

three levels of achievement. Those who attain the highest performance levels will be incentivized with 30% of their salary followed by 20% and 10% for those at the lower levels. Teachers who fail to achieve certain performance standards risk having their salaries frozen at the current level without promotion until performance improves.

School head teachers should be objectively appointed by the MESVT through appropriate, merit-based evaluations and must be able to guide and lead the other staff to perform their duties effectively. To create healthy competition and motivation amongst the provinces, the PEO will create recognition awards for high performing schools. PEO officials will also visit well-performing schools on an annual basis. They will identify if any district or zone is making good progress and use the learned best practices to help other lagging districts. The DEBS will work to encourage teacher retention and improve literacy levels. The DEBS should implement measures to incentivize teachers to decrease absenteeism. These methods can include direct deposit of paychecks and notice to teachers via mobile phone through a private-public partnership with Zambian phone companies, Airtel and MTN. This will reduce absenteeism by eliminating the need for teachers to travel to the DEBS and miss school to collect their paycheck

Evidence and Best Practices:

Centralization as a method of implementation is also supported by a UNESCO report which demonstrated that one of the largest issues for quality of education is lack of regular inspection. Malawi has seen increased absenteeism in rural schools where inspections are made less frequently.[15] This issue has detrimentally affected curriculum planning, placing rural schools at a disadvantage because of the lack of oversight.[16] This alternative seeks to improve absenteeism through inspection and calls for the MESVT to train teachers on the importance of education and their role as change agents responsible for the successful implementation of the new language policy. By highlighting the importance of teachers in the successful development of Zambia, commitment and accountability levels will increase, especially through the involvement of the teachers' union.

A similar method of centralization was utilized with great success in Brazil to improve school performance. A recent McKinsey report states that the better the school becomes, the less need for centralization it has. However, when a school is poorly ranked and needs to significantly improve literacy rates, a centralized approach is appropriate. These conclusions were based off of studies of 20 different school systems worldwide that made significant progress. Those poorly ranked systems that McKinsey observed all faced issues of teacher motivation and participation, absenteeism, school management capacity, and low student literacy through centralization. By examining several poorly ranked countries, McKinsey learned that all countries were using the same general set of strategies to overcome those issues.

These countries all centralized the education system by equipping and providing motivation for teachers and principals, overseeing schools through capacity building and monitoring, and

[15] UNESCO (2011). Improving the Conditions of Teachers and Teaching in Rural Schools Across African Countries.
[16] UNESCO (2011).

decreasing student absenteeism. McKinsey notes that cultural and socioeconomic factors did not change the effectiveness of these strategies, as each country's characteristics varied greatly.

Of the schools studied, one of the lowest ranked systems was in Minas Gerais, a Brazilian state, that when faced with low literacy levels, adopted a centralized approach.[17] Minas Gervais, like Zambia, was facing issues with oversight and accountability among teachers. In order to overcome this issue, the State Department of Education set "school level improvement targets," and created curriculums with administrative guide books to be used by every school. They also formed a core team on the state level that oversaw schools' progress. These changes resulted in an increase of reading levels for eight year olds from 49% in 2006 to 86% in 2010.[18] The strategies used in Minas Gerais are appropriate for Zambia because of the similar implementation barriers faced by both in their attempts to increase literacy rates. Additionally, Minas Gerais' best practices in creating more standardized curriculums and tracking school performance were implemented in two other countries that resulted in a significant increase in literacy rates.

Projected Outcomes:

The effectiveness of this alternative will be measured using indicators including the number of teachers trained; number of head teachers trained on leadership and curriculum implementation; number of teachers undergoing annual performance review; number of schools receiving copy of policy guidelines; and the number of monitoring and evaluation activities per term. The expected outcomes from this alternative are improved communication and coordination between MESVT offices, clear implementation guidelines for schools and teachers, improved head teacher leadership skills, higher accountability due to increased monitoring and evaluation, and increased teacher empowerment through involvement in curriculum development. This alternative's clear implementation guidelines and increased MESVT oversight will improve accountability, communication, and coordination.

Alternative 3: Redesign the Teacher Deployment System

This alternative seeks to address the negative repercussions of the MESVT's current system of assigning, transferring, and deploying teachers to government schools across the country. This practice results in numerous challenges for the Zambian education system. These include ineffective teaching due to language barriers, high rates of teacher absenteeism, low teacher commitment to their communities, and high rates of HIV among the teaching population due to the transient nature of the job. This alternative seeks to address these issues through the implementation of a new teacher deployment system with a particular focus on improving literacy levels and the quality of education.

The teacher deployment system is designed to assign teachers in schools that are not located in their home province. This system originated after independence in 1964 and sought to keep tribalism from developing among the population of the newly formed country. This practice has produced a trade-off between decreasing tribalism and the teacher's knowledge of and ability

[17] Mourshed, M. et al
[18] Mourshed, M. et al

to teach in the local language. Research indicates that that Zambian national identity is not affiliated with any specific local language. A study on Zambian linguistic identity stated that "tribal identity does not correspond directly to linguistic distinctiveness".[19] The study further showed that there is overlap of languages amongst tribes since there are far more tribes than languages spoken in Zambia. This research suggests that tribalism is no longer a serious concern in Zambia.

How it would work:

Successful implementation can be achieved through the following steps. First, adequate resources must be appropriated by the MESVT and donor organizations to ensure that teachers have access to adequate resources and training. Proper assessment will need to be conducted by the MESVT to ensure that the teaching population is trained in the methodology and language skills necessary to effectively deliver lessons. Additionally, time and resources for research and development will be necessary in order to strategically plan for the effective redesign of the deployment system to incorporate the linguistic abilities and geographic preference of teachers. Finally, the MESVT must ensure training at all levels on the appropriate implementation of the new education policy with a specific focus on literacy and language of instruction.

The MESVT will develop guidelines to assess those individuals in teacher training programs on language ability in addition to current assessment criteria. Trainings on multi-lingual classroom instruction and literacy methodology will be required at teacher colleges and universities. Guidelines for teacher qualification will be expanded to include a provision for language ability and literacy methodology. New teachers will be assigned to work in a province where the basic school local language of instruction corresponds to their own linguistic abilities. Those teachers who are willing to be assigned to rural areas will be given priority for school assignment. This will address the issue of staffing at rural schools and the current challenge of effective local language instruction. It will also help to reduce teacher absenteeism by allowing teachers to live and work near their families in their home provinces. This policy will be grandfathered in for new teachers beginning in 2015 in order to avoid the disruption that may occur in attempts to transfer all existing government school teachers. The quick assessment and appropriate assignment of teachers to their respective schools by the MESVT's Department of Administration and Human Resources is essential for effective implementation of this alternative.

Evidence and Best Practices:

A 2011 UNESCO report on education in Africa attributed failure to achieve the Millennium Development goals and the Zambian Education for All program to the system of teacher deployment.[20] While best practices on this issue are still emerging, research indicates the existence of many barriers a deployment system must overcome to be effective. A primary

[19] Kula, N. & L. Marten. Zambia: 'One Zambia, One Nation, Many Languages'
[20] UNESCO (2011). Improving the Conditions of Teachers and Teaching in Rural Schools Across African Countries.

problem identified in the report is the lack of teachers willing to move to the rural areas.[21] Many African countries, including Malawi, are experiencing a population shift from rural to urban areas. This trend has resulted in a shortage of qualified teachers in the rural areas introducing education inequality between the rural and urban areas.[22] This problem is also present in Zambia, as teachers avoid going to the rural areas in favor of more developed districts. Incentivization to encourage teachers to move to rural areas where they are fluent in local language has the potential to solve the teacher shortage issue and improve literacy levels. A UNESCO report entitled "Promoting Literacy in Multilingual Settings" discusses vital characteristics for a multilingual teacher to have, stating "A teacher needs to be a fluent user of the language of instruction, [they] need to be able to read and write in the language of instruction to be a good model to the learners of both reading for meaning and accurate reading."[23] This highlights the importance of appropriately deploying teachers and the positive effects this alternative can have on the education system as a whole.

Projected Outcomes:

The success of these activities will be measured through outputs that include but are not limited to the number of teachers (both current and those in teaching colleges) receiving training in language and literacy methodology, the number of teachers meeting the MESVT language of instruction and literacy methodology requirements, and the number of teachers volunteering to work at rural schools. It is projected that this alternative will result in improved literacy levels and standards of learning by facilitating implementation through increased capacity and commitment. Projected outcomes include a reduction in teacher absenteeism, an increase in commitment and accountability on the part of teachers and communities, and increased literacy levels in basic schools in both local language and English. This initial investment in basic education will lead to greater learning and student capacity in secondary education and beyond. Improved standards of education can have a positive impact Zambia's economy, health, gender equality, and overall development as a nation.

Alternative 4: Decentralization

This alternative makes use of decentralization to mitigate the accountability and oversight problems plaguing implementation. The MESVT will utilize the existing district, zone, and school leadership to facilitate successful implementation of the new policy. This will be achieved through the engagement of Zonal Resource Centers (ZRCs), Zonal In-Service Coordinators (ZICs), Parent Teacher Associations (PTAs), and the development of Community Education Task Forces (CETFs) at the zonal level. These stakeholders will receive support and timely feedback from officers at the DEBS and PEO as needed. It is projected that the successful

[21] UNESCO (2011). Improving the Conditions of Teachers and Teaching in Rural Schools Across African Countries.
[22] UNESCO (2011).
[23] UNESCO (2011).

engagement of leaders, teachers, and community members at these levels will result in effective implementation

How it would work:

The District Board Education Secretary (DEBS) will act as the facilitator between the MESVT and individual zones. The DEBS will provide guidance and training to the zonal level through the use of the ZRCs and the ZICs. The ZRC is typically based at individual Zonal Center Schools (ZCS) which is the largest school in the zone. The ZRC is a separate building at the ZCS where teacher trainings are held and resources housed for the entire school zone. The ZIC is responsible for facilitating and organizing teacher trainings for the zone. Additionally, the ZIC is expected to conduct monitoring and evaluation of all the schools in the zone and provides feedback on school progress to the DEBS through regular reporting.

In order to maximize the use of the ZRC in decentralization, the MESVT should train ZICs on the new education policy and implementation guidelines. ZICs will be responsible for disseminating this information to the zone. Additionally, the MESVT will facilitate the development of CETFs at the zonal level. This task force will be made up of community leaders or those community members who have an interest in education. The CETF will assist the ZIC in his or her monitoring and evaluation activities. ZICs will be responsible for maintaining close communication with the CETF in order to learn what concerns exist within the schools and include these in district reports.

The CETF members will participate on a voluntary basis though they may be provided with in-kind payment including meals, training, or bicycles to assist with their monitoring activities. The DEBS and ZIC will be responsible for training the CETF on monitoring and evaluation techniques as well as the Zambian government's overall goals and initiatives regarding education. This will ensure that the new language policy is being properly implemented and that any gaps in implementation can be quickly addressed by the ZIC and the DEBS. The CETF and ZIC will also work to increase community involvement and investment in education through PTA empowerment. The CETF will host a meeting each school term for all PTA Presidents in the zone. These meetings will update and inform the PTA Presidents on MESVT education policies and initiatives and will also function as a time for the PTA Presidents to discuss and learn of school progress in their zone.

At the end of each school term, individual PTAs will be given a copy of the ZIC's report for the district. This will allow them to provide their communities with feedback on their school's progress. This will help to hold schools accountable to the district, parents, and the community as a whole. Through the public review of these reports, schools will be incentivized to improve their standards of learning. Additionally, the MESVT will also develop a performance-based accreditation system to grade schools. Those schools who achieve an 'A' grade for an entire calendar year (three consecutive school terms) will be publically recognized by the MESVT. This recognition will include announcement of the school's achievement on the

radio, the provision of certificates, and official MESVT recognition ceremonies at individual schools. This public accreditation system will encourage innovative practices to increase student learning while increasing school accountability and community awareness.

Evidence and Best Practices:

Decentralization, primarily through the use of community involvement, is still in the process of being tested in an educational setting. However, the USAID *Kenya Ciwara* Program in Mali successfully used community empowerment initiatives to significantly improve their health sector. USAID attributed much of the success of *Kenya Ciwara* to the program's ability to connect with local partners. Community involvement was used to ease the difficulty of reaching smaller, rural villages. In order to accomplish this objective, the program mobilized community organizations and partnered with the district level health boards to tailor the program to local needs while conducting health education for community organizations.[24]

According to USAID, this training increased the community organizations effectiveness by 17% from the start of the program, resulting in greater community support for the program and better health services. [25]This model can be transferred to Zambia to help empower local communities through capacity-building and ultimately improve overall standards of education. *Kenya Ciwara* also created an accreditation system where a community could receive public awards for achieving benchmark healthcare goals. These ceremonies served as a way to incentivize a community to move forward and reach set goals. This can successfully transfer to a Zambian setting in order to improve education achievement at the basic school level.[26]

Projected Outcomes:

The success of decentralization as a mode of implementation will be measured by the number of zonal reports sent to the DEBS by the ZIC, the number of times the DEBS responds to zonal concerns within a one week time frame, and the number of unannounced monitoring visits conducted by DEBS officials. Additionally the success of the CETF initiative will be measured by the number of CETFs developed and trained across the country, and the number of school monitoring visits they make. This mode of implementation has the potential to empower those at the community level and provide for local innovation around the implementation of the new language policy. This alternative will improve communication at all MESVT levels, hold schools and teachers accountable for student achievement, put into place effective and efficient feedback mechanisms, and increase community awareness and involvement in education. By increasing accountability and transparency at each ministry level while simultaneously mobilizing and empowering communities, this alternative has the potential to improve the overall quality of education in Zambia.

[24] Koita, N. (2003)
[25] Koita, N. (2003)
[26] Koita, N. (2003)

Outcomes Matrix

	Gains in Student Learning	Cost Effectiveness	Political Feasibility	Capacity	Sustainability	Timeframe
Let Present Trends Continue	30%	0.28	Medium	Medium	Medium	15+ years
Standardization	50%	0.15	Low	Low	High	15+ years
Teacher Deployment	**50%**	**0.28**	**High**	**High**	**High**	**8-15 years**
Decentralization	**50%**	**0.46**	**Medium**	**Medium**	**High**	**8-15 years**

Alternative Rankings and Trade-Offs

Alternative 1: Let Present Trends Continue

Gains in student learning: 30% (Low)

There is not enough support or evaluation on how the policy is being implemented, and thus projected learning outcomes are low. Although there is a National Implementation Framework for the general education policy, which includes monitoring, and evaluation and teacher training and deployment efforts, the NIF does not explain how they will measure the impact of teacher training or how monitoring and evaluation results will be used to improve schools and learning.

Cost Effectiveness Ratio: 0.28

	Activity	Estimated Cost($)
1	Teacher Training (75,000 teachers)	$1,800,000
2	New Material	$600,000
3	Transportation and Distribution	$16,000
	Total Cost	$2,416,000

Political Feasibility: Medium

The political feasibility of the status quo option is ranked high as the policy is already being implemented without serious political opposition. There are on-going debates in

parliament but the opposition is not strong enough to make this alternative politically unfeasible. However, in the long run, the current method of implementation may engender political opposition, as this option is not predicted to improve gains in learning and literacy. Politicians and the general public may grow frustrated with this lack of improvement and speak out against it. Teachers, MESVT officials, and schools may also find the lack of guidance to be frustrating if gains in student learning are not evident.

Capacity: Medium
As it is up to individual schools to implement the policy, a large part of capacity and economic needs are already being met. However, the NIF stated that the Ministry intends on recruiting and training 16,000 additional teachers for improved basic education, which contributes to budget and staffing needs. In regard to monitoring and evaluation, the ministry is merely adding additional responsibilities and committees to organizational structures that already exist; however, the need for additional monitoring and evaluation staff is not outlined in the NIF.

Sustainability: Medium
After the initial teacher and recruitment drive in the first few years, this option does not require staffing or budget inputs, which makes it sustainable in regard to resources. In regard to developing stakeholder ownership, the Ministry is implementing teacher training programs. However, there is no evidence that the Continuing Professional Development workshops and the Education Management and Leadership courses actually increase teacher motivation and sense of ownership. Furthermore, there also needs to be a sense of ownership at the administrative level, and the MESVT has not addressed this need.

Timeframe: 15+ Years
It is projected that the amount of time necessary for this alternative to result in positive gains in learning is 15 or more years. This ranking was given because of the enormous implementation challenges that currently exist and the amount of work that would need to be done in order to close existing gaps. Achieving successful policy implementation through this alternative will take a long time compared to the other options.

Trade-Offs
Trade-offs associated with this option include a reduction in gains in student learning in favor of increased economic and political feasibility and capacity. Apart from hiring additional teachers, the Ministry is relying on its existing organizational structures and processes to effectively implement this policy, keeping economic, capacity, and political costs low. However, the issue of teacher and community engagement is not adequately addressed and the impact of monitoring and evaluation is ambiguous, which will hinder school quality improvement and gains in student learning.

Alternative 2: Centralize and Standardize the Curriculum

Gains in Student Learning: 50% (High)
The gains in student learning associated with this policy alternative are projected to be high. Similar initiatives in other countries such as Brazil linked centralization to improved gains in student learning. This alternative will bridge the communication gap of implementation of the

policy which will lead to effective implementation. This also includes various pedagogical approaches to improve literacy levels in general. This will also reduce the other factors like teacher absenteeism, lack of resources, and low commitment which are hindering student performance.

Cost Effectiveness Ratio: 0.15

This alternative will have high initial costs. This will involve training of the teachers, allocating resources, incentivizing well performing staff, improving logistics for stringent monitoring and evaluation, and developing pilot programs. Training, allocating resources and creating pilot programs will be a one-time cost but monitoring, evaluating and incentivizing will be recurring costs. Therefore it will be within the budget but will have regular implementing costs.

	Activity	Estimated Cost($)
1	Performance-Based Incentives (75,000 teachers)	$3,600,000
2	New Material	$600,000
3	Transportation and Distribution	$16,000
4	Monitoring and Evaluation	$327,091
5	Public Recognition	$2,400
	Total	$4,545,491

Political Feasibility: Low

This alternative could face opposition from several stakeholders, the largest of which would be the Zambian government. The government is currently focused on decentralization and moving in the opposite direction would be met with strong opposition. However, this alternative would be met with support from those within the MESVT and at the local level who are seeking guidance on how to best implement the policy change. The education system is often chaotic due to its lack of organization and this alternative could help to balance those issues while improving understanding and awareness.

Capacity: Low

MESVT would need high amount of resources for implementation. Creating pilot programs, training MESVT officials and schools, providing resources for monitoring and evaluation, and improving coordinating logistics requires a higher capacity than what is currently in place.

Sustainability: High

This alternative received a ranking of high for the sustainability criteria. This alternative will strengthen the structure of the MESVT and will standardize the process for curriculum and

policy implementation. It would also be easy to adapt to any future developments as policy implementation directives would be disseminated using the existing MESVT structure.

Timeframe: 15+ Years

The implementation feasibility for this option is low. The MESVT must develop this program from the beginning and would involve reworking the entire system. The government is moving away from centralization which makes this alternative a difficult one to implement.

Trade-offs

To achieve high gain in student learning and sustainability there is a trade-off between economic feasibility and timeframe. MESVT will have to allocate its budget in a way to implement this efficiently. More funds allocated in the beginning can lead to faster results and gains in student learning but these funds may be allocated at the expense of other MESVT programming and resource needs.

Alternative 3: Redesign the Teacher Deployment System

Gains in Student Learning: 50% (High)

The gains in student learning associated with this policy alternative are projected to be high. A major challenge in the Zambian education system is the language of instruction and its influence on literacy levels. Prior to the policy change, teachers were expected to teach in local language until Grade 2. However, many teachers were teaching in the wrong local language due to the fact that they could not speak the mandated language of instruction. Other teachers who spoke the appropriate local language would often revert to using that as language of instruction instead of English due to the frustration of teaching large, multi-level classes in English. The teachers' failure to adhere to the mandated language of instruction in combination with limited resources resulted in inconsistencies and low levels of pupil learning. A UNESCO report highlights the importance of teaching in the appropriate language, "A teacher needs to be a fluent user of the language of instruction. Members of the community who are mother tongue speakers of the language of instruction are often the best teachers".[27] By standardizing the language skill criteria for teachers and assigning teachers to schools where they will be able to communicate and effectively teach in the appropriate language of instruction. This in combination with the new language policy will allow pupils to make enormous gains in literacy in their own local language before they begin learning in English.

[27] UNESCO (2011). Improving the Conditions of Teachers and Teaching in Rural Schools Across African Countries.

Cost Effectiveness Ratio: 0.28

This alternative is very cost effective. Though there are some initial start-up costs, these are necessary in order to ensure adequate teacher training and dissemination of the new policy. There may be costs associated with the initial redesign of the teacher deployment system which will be necessary in order to determine where the capacity gaps lie in terms of teacher language abilities. Once the system of training, assessment, and deployment is in place, there will be no initial costs to the MOE as they will only be responsible for paying the teacher salaries that are included in their current budget.

	Activity	Estimated Costs($)
1	Teacher Training	$1,800,000
2	New Material	$600,000
3	Program Design and Implementation Training (MESVT Office of Administration and Human Resources)	$4,800
	Total	$2,404,000

Political Feasibility: High

The political feasibility of this alternative is high due to the fact that there is likely to be little opposition to the proposed training and deployment policy. The risk of tribalism is no longer a concern and the public is extremely likely to accept this new policy as it will bring increase student gains in learning. The Zambian Teachers' Union is likely to support this policy alternative as well in that it will give teachers more freedom of choice when it comes to deployment location. By learning the language of the area in which they wish to teach, teachers will position themselves as having more control over the area to which they are deployed.

Capacity: High

The MESVT Office of Human Resources and Administration is already in charge of the deployment system. After an initial training in program design and implementation, and a redesign of the deployment system, this office can continue their operations. The capacity of teaching colleges and universities will need to be increased in order to ensure that teachers are receiving adequate training in appropriate languages and are skilled at teaching in multi-lingual situations. There is high feasibility for coordination between the MESVT and teacher training institutions under this policy alternative. The hierarchical structure of the MESVT can be used to facilitate the implementation of this policy. No changes will need to be made to the current structure and all MESVT levels will take part in implementation.

Sustainability: High

This alternative received a ranking of high for the sustainability criteria. Though there is initial effort on the part of teaching colleges and universities and the MESVT in order to establish the new system of teacher deployment, in the long-term it will be extremely sustainable. Despite the initial start-up cost, once the deployment system has been redesigned there will be no additional costs for the Ministry of Education and as a result there will be no need to depend on external, donor funding to keep the policy alternative successfully in place.

Timeframe: 8-15 years

The estimated timeframe for implementation is 8-15 years. It will take some time for the deployment system to be redesigned but once it is in place, implementation will move smoothly.

Trade-Offs for this Alternative

Trade-offs may be necessary during the implementation of this policy option due to the resources and reality under which the Ministry of Education is operating. For example, in order to provide teachers with additional training in language of instruction, training for other important subjects such as science and math may be sacrificed in the process. Tension between the power of the MESVT in assigning and deploying teachers versus the new power of the teachers themselves could become an issue in the hierarchy but not that concerning due to the plan for government decentralization that is already in place. The largest trade-off associated with this policy is without a doubt the economic costs that will be necessary in order to see increased gains in student learning. However, the economic costs that may be diverted from other Ministry of Education programming are worthwhile in that they will expand the success and prosperity of the entire nation by greatly improving the quality of education.

Alternative 4: Decentralization

Gains in Student Learning: 50% (High)

Decentralization is projected to generate high gains in student learning. By empowering community organizations such as the PTA and the newly developed CETFs, the MESVT can ensure that communities are being reached and involved by the education system. As parents are further involved, they will be more committed to their child's education and accountability will increase as a result. CETFs will also be able to more accurately inform the ZIC and MESVT of individual school resource needs and challenges. This will lead to improved communication and overall standard of learning throughout the country.

Cost Effectiveness Ratio: 0.46

The costs associated with this are low and therefore feasibility is high. Decentralization is already in process and there are no additional costs.

	Activity	Estimated Costs($)
1	CETF development and recruitment	$480,000
2	New Material	$600,000
3	Transportation and Distribution	$16,000
4	CETF Incentives Bikes (532,500) Meals (958,500)	$207,888
5	District Follow-Up Training (15% of schools) K478,500 District M&E Visits (50% of schools) K333,333	$130,080
	Total	$1,433,968

Political Feasibility: Medium

There will be few political issues since the Zambian government is already decentralizing its ministries. Gaining the support of the MESVT to establish the CETF and empower the PTA and community members should be relatively easy. The largest political challenge will be the allocation of authority and oversight from the DEBS and the ZIC to the CETFs. This allocation could generate some tension but will overall help to improve the quality of education.

Capacity: Medium

Decentralization has a medium level of feasibility for capacity. No serious restructuring must take place in the MESVT which reduces coordination challenges. The greatest capacity concerns could be ensuring the continued participation of community leaders in the CETF and PTAs. The increased coordination and capacity brought by the CETF and PTAs will be contingent upon the involvement of community leaders. If those leaders are committed, both the CETF and PTAs will generate more efficiency as they liaise between the ZIC, the DEBS, and the community.

Sustainability: High

Because this alternative provides a set structure for implementation and engages the community, its prospects for sustainability in the long-run are high. Once the CETFs have been established and gain recognition and prestige in the community, it will be relatively easy to maintain this system of monitoring and evaluation.

Time-Frame: 8-15 years

It is estimated that this alternative will take 8-15 years to be fully implemented. This time frame is projected because the rural nature of some schools and communities means that it may take several years for the positive effects of this alternative to be seen.

Trade-offs:

Decentralizing the school system will provide high gains in student learning at a low cost but this will require risking some capacity and causing political issues. The success of this alternative largely depends upon how willing current MESVT officials are to allocate some power to community leaders. While decentralization will be sustainable in the long run, its initial establishment will take time and require a great deal of resources, commitment, and community support.

Recommendation

The MESVT should utilize a combination of decentralization and teacher deployment redesign to effectively implement the new language of instruction policy.

We believe that this combination of alternatives will lead to successful policy implementation. A combination of decentralization and redesigning the teacher deployment system will address the outlined barriers for implementation including limited resources and human capacity, low awareness levels, lack of commitment, poor accountability within the education system, and non-existent feedback mechanisms. These five challenges in combination with underlying cultural factors create implementation gaps that are hindering policy implementation and preventing improvements in education. Our recommendation will address these by empowering local communities, schools, and teachers and equipping them with the skills necessary for effective policy implementation. This recommendation is supported by best practices in similar countries including Mali and Malawi, in-depth research, and extensive conversations with implementers working on the ground in Zambia. These two alternatives take into account the current barriers for implementation both cultural and otherwise. These two alternatives were the most cost-effective as they result in the highest gains in student learning in comparison to the costs of implementation.

Capacity will be improved through MESVT teacher assessment on language ability in addition to current assessment criteria. Trainings on multilingual classroom instruction and literacy methodology will be required at teacher colleges and universities. Guidelines for teacher qualification will be expanded to include a provision for language ability and literacy methodology. New teachers will be deployed to provinces where the language of instruction

corresponds to their own linguistic abilities. These measures will increase the education system's capacity to implement the language change policy at negligible cost. Awareness and commitment will be increased through the development and use of CETFs, increased monitoring and evaluation at the local level, additional trainings for teachers and schools, and the involvement of the Zambian Teacher's Union. Increasing teacher agency through deployment location preference will increase their commitment to education in the communities where they are working.

Accountability will be addressed through decentralization. By empowering and involving local communities and zonal leadership, teachers and schools will be held accountable for student learning. The performance-based incentives for teachers combined with the grading system for schools will increase commitment, awareness, and improve accountability. This recommendation will also ensure that feedback measures are put into place and that each level of the MESVT is aware of their roles and responsibilities when it comes to assessing reports and providing support to the zonal and school levels. The utilization of the CETFs and PTA will ensure that the educational concerns of the community are relayed to the MESVT. Increased community involvement will help to address the cultural factors such as attitudes towards education that have the potential to hinder effective policy implementation.

Additionally, these two alternatives are more cost-effective in relation to gains in student learning than the other options. The decentralization CER is 0.46 and the teacher deployment CER is 0.28. Both of these alternatives provide the highest gains in student learning at 50% each. Sustainability is another essential criteria for successful implementation and both alternatives scored high in this category and have the ability to be effectively implemented in a relatively short time frame.

There are inevitable trade-offs associated with this recommendation. These two alternatives will result in a trade-off between training teachers on literacy and language as opposed to other necessary skills. Additionally, there are high start-up costs associated with each option though these will pay-off in the long run with high gains in student learning. By selecting these two alternatives over centralization and letting current trends continue, trade-offs over the distribution of power within the MESVT will also arise. For example, the recommended alternatives will transfer power to teachers and zonal levels, which may reduce the capacity of the MESVT. However, the gains in teacher, school, and community empowerment make the trade-off worthwhile in the long-run. Improving capacity at lower-levels will reduce the amount of control at higher-levels, which may be politically risky, but is a trade-off that must be made in order to achieve high gains in student learning, increased literacy levels, and an overall improved education system in Zambia.

Appendix A: Cost-Effectiveness Break-Down

1 Exchange Rate Used: $1 US Dollar = 6.25 Zambian Kwacha

$$\text{Cost Effective Ratio (CER)} = \frac{\text{Desired Literacy Rate (68\%)}}{\text{Cost per alternative}}$$

DETAILED CALCULATIONS:

1. **Let Present Trends Continue**

Details
I. Teacher Training Costs
Per Diem = K50 No. of days = 3 No. of teachers = 75,000 Total = 75000*50*3 = K11,250,000 **In Dollars = 11250000 * 0.16 = $1,800,000**
II. New Material
Cost per material = K50 No. of teachers = 75,000 Total : 75000*50 = K 3,750,000 **In Dollars = K 3,750,000 * 0.16 = $600,000**
III. Policy and Curriculum Distribution (Printing and Transportation Costs)
Gasoline: K120 per 100km * 416= K49,920 Zones: 416 Printing Policy and Curriculum for 4259 schools = K50,080 Total = K100,000 **In Dollars = K100,000 * 0.16 = $16,000**

2. **Centralize and Standardize Curriculum**

Details:
I. Performance Based Incentives:
No. of teachers: 75,000 Incentive per year (average raise) = K300 Total : 75000*300 = K22,500,000 **In Dollars: K22,500,000*0.00016 = $3,600,000**
II. New Teaching Materials:

Cost per material : K50 No. of teachers: 75,000 Total : 75000*50 = K3,750,000 **In Dollars: K3,750,000 * 0.00016= $600,000**
III. Policy and Curriculum Distribution (Printing and Transportation Costs)
Gasoline: K120 per 100km * 416= K49,920 Zones: 416 Printing Policy and Curriculum for 4259 schools = K50,080 Total = K100,000 **In Dollars = K100,000 * 0.16 = $16,000**
IV. Monitoring and Evaluation by MESVT
Fuel: K120 per 100km (estimated day of monitoring) Lunch: K20 per person/per day Vehicle Maintenance: K20/visit K160= total cost per monitoring visit No. of schools: 4259 * 3 visits per year (once each term) * K160/visit= K2,044,320 Total: K2,044,320 **In Dollars : K2,044,320*0.16=$327,091**
V. Public Recognition:
5000 * 3 terms = K15000 Total = K15000 **In Dollars = K 15,000 * 0.16 = $2,400**

3. Redesign the Teacher Deployment System

Details:
I. Teacher Training:
Per Diem: K50 No. of days: 3 No. of teachers = 75000 Total = 75000*50*3 = K11250000 **In Dollars = 11250000 * 0.16 = $1,800,000**
II. New Material:
Cost per material: K50 No. of teachers: 75000 Total: 75000*50 = K 3,750,000 **In Dollars = K 3,750,000 * 0.00016 = $600,000**
III. Program Design and Implementation Training for MESVT
Consultant Fee: Two consultants@$200/per person/day - $2,000 for a 5-day training= K12,500 Training Materials =K7,500 Training Venue and Food: = K5,000 Per diem: 100/day per person * 10 people *5 days = K5,000 Total: K30,000 **In Dollars: K30,000 *0.16 = $4800**

4. Decentralization

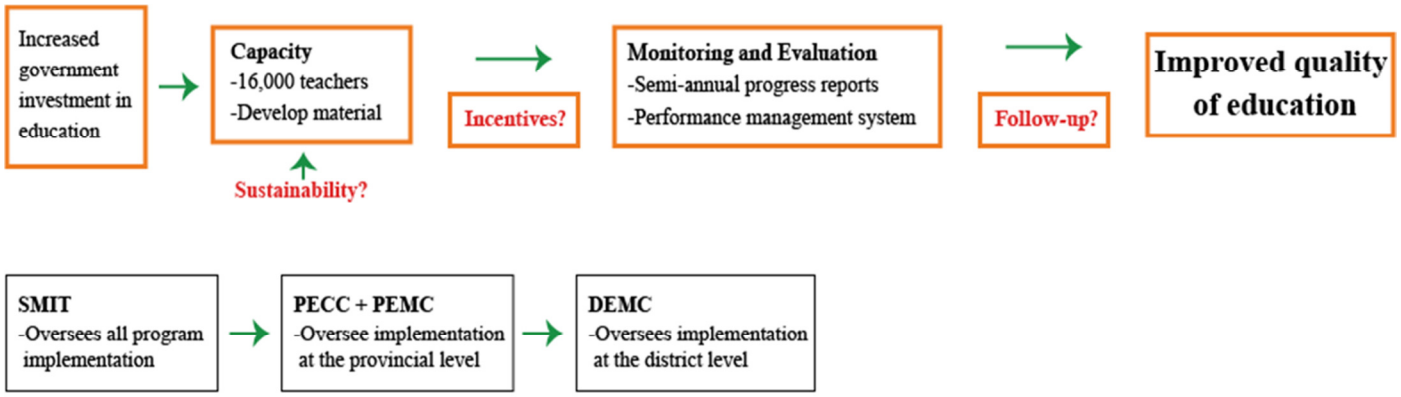
Details:
I. CETF development and recruitment
5-Day Training Cost: K250/person *2130 = K532, 500 Certificates: K50/person *2130 = K106,500 Materials: K50/person*2130 =K106,500 Advertisement (Television, Radio, Newspaper)= K2,254,500 Total = K3,000,000 **In Dollars : K3,000,000 *0.16 = $480,000**
II. New Teacher Materials:
Cost per material: K50 No. of teachers: 75,000 Total : 75000*50 = K3,750,000 **In Dollars: K3,750,000 * 0.16= $600,000**
III. Policy and Curriculum Distribution (Printing and Transportation)
Gasoline: K120 per 100km * 416= K49,920 Zones: 416 Printing Policy and Curriculum for 4259 schools = K50,080 Total = K100,000 **In Dollars = K100,000*0.16 = $16,000**
IV. CETF Incentives (Estimated for 2130 People – One monitor will visit two of the 4,259 schools each month)
Bikes = 2130 * K250 each (one time cost) =K 532,500 Meals= K20 each * 2 meals per month * 9 months per year * 2130 people 2 visits per month /9 months a year Meals: K 766,800 Total: K 1,299,300 **In Dollars: K1,299,300 * 0.16 = $207,888**
V. District Follow-up Trainings:
No. of schools = 4259 15 % of schools estimated to require training = 638 15% of Schools = 16 teachers (on average) * K50 per diem *638 schools = K510,400 50% of schools estimated to require monitoring and evaluation visits=2130 Cost per visit K140 *2130= K302,460 Fuel and Lunch/visit = K140 Total: K 808,600 **In Dollars: K 813,000 *0.16 = $130,080**

FINAL COST-EFFECTIVENESS RATIO:

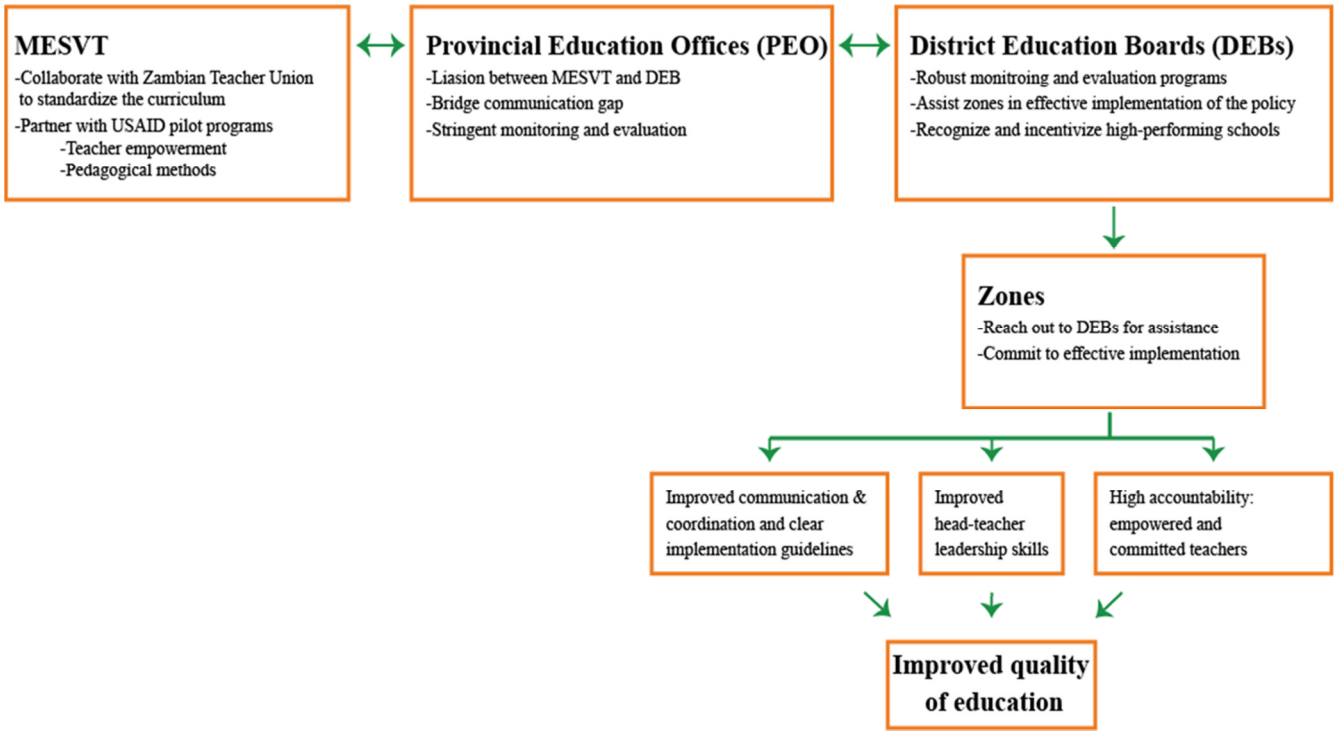
Alternative	Cost($)	Reading Effect	Cost effectiveness Ratio(per $1,000,000)
Let Present Trends Continue	2,416,000	0.68	0.28
Centralize and Standardize Curriculum	4,545,491	0.68	0.15
Redesign the Teacher Deployment System	2,404,000	0.68	0.28
Decentralization	1,433,968	0.68	0.47

Appendix B: Implementation Flow-Charts

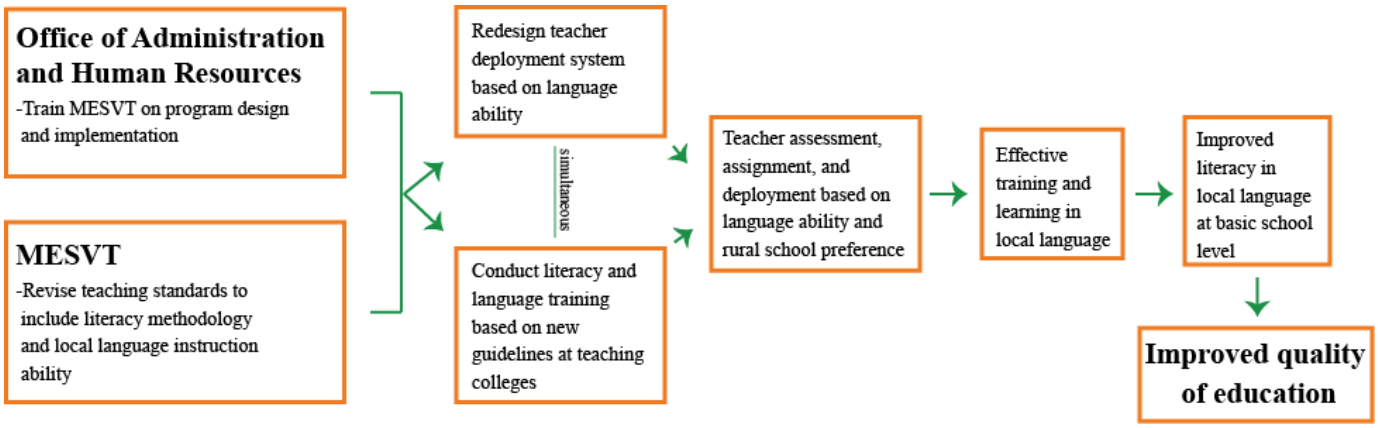
ALTERNATIVE 1: LET PRESENT TRENDS CONTINUE



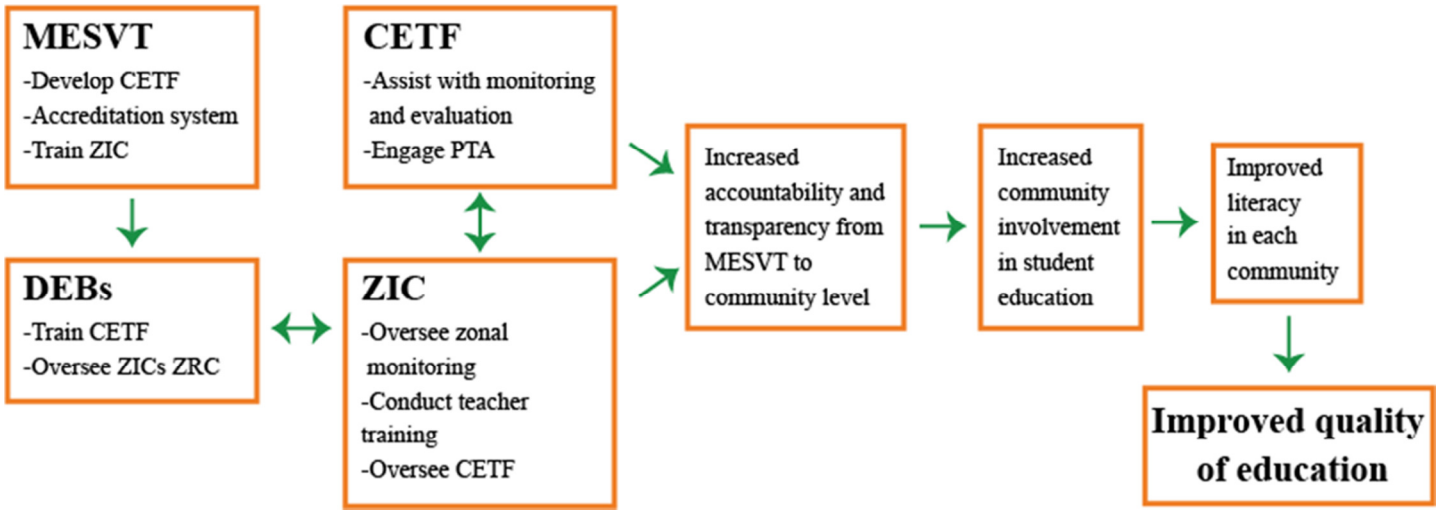
ALTERNATIVE 2: CENTRALIZE AND STANDARDIZE THE CURRICULUM



ALTERNATIVE 3: REDESIGN THE TEACHER TRANSFER SYSTEM



ALTERNATIVE 4: DECENTRALIZATION



Appendix: Additional Evidence

This appendix provides further information about the primary best practices utilized in this analysis.

USAID *Kenya Ciwara* Program for Community Involvement; Mali

The *Kenya Ciware* Program is an initiative designed to increase community involvement in improving the level of health in Mali. With the assistance of USAID, Mali utilized community empowerment initiatives to produce significant health sector improvements. USAID attributed much of the success of *Kenya Ciwara* to the program's ability to connect with local partners. Community involvement was used to ease the difficulty in reaching smaller, rural villages. In order to accomplish this objective, the program first focused upon mobilizing permanent community organizations. The program worked with district-level NGOs and community health associations to tailor the program to local needs. *Kenya Ciwara* reached a majority of community members by educating leaders of men's and women's local community groups.

In order to ensure that these community organizations were trained, *Kenya Ciwara* held workshops on how to create program implementation plans, conduct monitoring and evaluation, manage finances, and educate on relevant health issues. According to USAID, this training increased the community health organization's effectiveness by 17%, resulting in greater community support for the program and better health services. Lastly, the *Kenya Ciwara* Program created an accreditation system where a community could receive a Gold *Ciwara* Award for reaching goals in healthcare that were predetermined by the program. These award ceremonies were attended by approximately 2000-3000 people and were covered by the media. These ceremonies helped to incentivize the community to set and achieve health-related goals.

McKinsey, Centralized Strategy for Educational Improvement, Minas Gervais State, Brazil

McKinsey & Company proposes a strategy for school improvement based on observed best practices for schools across the world. This strategy utilizes a continuum of centralization to assess schools based on performance in relation to their place on the centralization continuum. The report states that the better the school becomes, the less need for centralization it has. However, when a school is in a poor ranking, needing to significantly improve literacy rates, they need a centralized solutions approach.

McKinsey provides the example of Minas Gerais, a Brazilian state, who when faced with low literacy levels, adopted a centralized approach. The State Department of Education set "school level improvement targets" requiring teachers to keep track of student progress for evaluation and measurement purposes and report their progress to them. They created curriculums with administrative guide books to be used by every school. Lastly, the Department of Education formed a core team at the state level that oversaw schools' progress. These initiatives resulted in huge gains in student learning for students in that state.

UNESCO, Empowering Local Communities, Philippines

The Philippines were struggling to improve education in rural areas where literacy levels were affected by the presence of minority languages. In order to increase literacy, the Philippine Bureau of Non-Formal Education along with the Department of Education developed a two-pronged program. First, the program developed local language materials and textbooks. These resources were then used in community education sessions. Additionally, a community needs

assessment in relation to education was conducted and capacity building for local leaders was developed in response. This program resulted in three major changes. First was increased community participation, second was the training of community leaders to assist in the development of educational material, and third was the development of a partnership between local tribal leaders and youth groups to meet and discuss education issues. Increased community involvement improved education capacity and helped to develop appropriate multilingual programs.

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