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Chapter 2 - Zambia Scoping Study

Ferdinand Chipindi & Helen Doyle

Introduction

The purpose of this small scale scoping study is to outline the key opportunities and challenges for strengthening the quality of teaching at the secondary level in Zambia. It will form part of an international study that covers five sub-Saharan African countries. It is intended to be useful to donor organisations with an interest in investing in improving the quality of teaching in secondary education in Africa.

The framing of teacher quality within this set of studies is set out in a separate document, *'Improving Secondary School Teacher Quality in Sub-Saharan Africa'* (Bainton et al., 2016). Teachers are viewed as professionals, with agency to interact with the education policy environment, their community and their school environments to shape and develop their expertise, skills and values.

The main question addressed by the study is:

What opportunities does Zambia offer a donor seeking to work in alignment with government to catalyze system wide strengthening of secondary teaching in order to improve relevant learning outcomes for the most disadvantaged?

The question is addressed through assessing the investment environment in Zambia against criteria, which are grouped into three areas:

- A - Enabling Environment
- B - Need
- C - Donor Operating Environment

This document presents the findings organized by these criteria. The conclusion identifies opportunities for catalyzing system wide improvement of teaching.

A Note on Methodology

The research design involved two phases of data collection. Phase 1 was a desk based review of key policy documents. Gaps in evidence relating to the criteria in Phase 1 were identified. In Phase 2 interviews were conducted with in-country experts, policy makers and representatives of development partners. Informants were selected and interview schedules designed to specifically address these gaps.

The policy documents reviewed were:

- Zambia Vision 2030
- Ministry of Education Strategic Plan 2003-2007
- Ministry of Education Science Technical, Vocational and Early Education Evaluation Guidelines

- Ministry of Education National Policy on Education, *Educating Our Future*, 1996
- National Implementation Framework II and II
- Fifth National Development Plan
- Revised *Educating Our Future* Document
- Teaching Profession Act of 2013

Interviews were conducted with:

- The Director, Teacher Education and Specialized Services, Ministry of General Education
- The Director, Standards and Curriculum, Ministry of General Education
- The Director, Planning and Information, Ministry of General Education
- A District Education Board Secretary (DEBS)
- A Provincial Education Officer
- A secondary school head teacher
- A representative from FAWEZA,
- A representative from USAID,
- A representative from JICA
- A Principal Education Standards Officer
- A secondary school science teacher.

Interview schedules consisted of a list of issues/questions addressed to each informant (see Appendix 2). Interviews were conducted face-to-face. Some informants also answered questions in writing through email. Findings from both research phases are presented together, organized according to the evaluation criteria.

Further detail on the Methodology can be found in the introduction to the cross-country report.

A. Enabling Environment

A1. Policy context for secondary education

- Is there a robust and coherent policy framework in place? Outline the framework.

The current National Educational Policy was originally formulated in the 1996 document, *Educating Our Future*, which was developed in the context of the liberalization of the Zambian economy in the 1990s. It is underpinned by six liberal democratic principles: liberalization, decentralisation, equality, equity, partnership and accountability. These principles are operationalized in more detail in a series of Education Sector National Implementation Framework documents, which are also informed by the five-year National Development Plans. The most recent of these is Education Sector National Implementation Framework III, published in 2010 and then updated in 2013. The Ministry published an evaluation of the progress of these policies, specifically against the Education For All criteria, for Education, Science, Vocational Training and Early Education (MESVTEE) in 2015. Fig. 1, below, illustrates the country's educational policy framework.

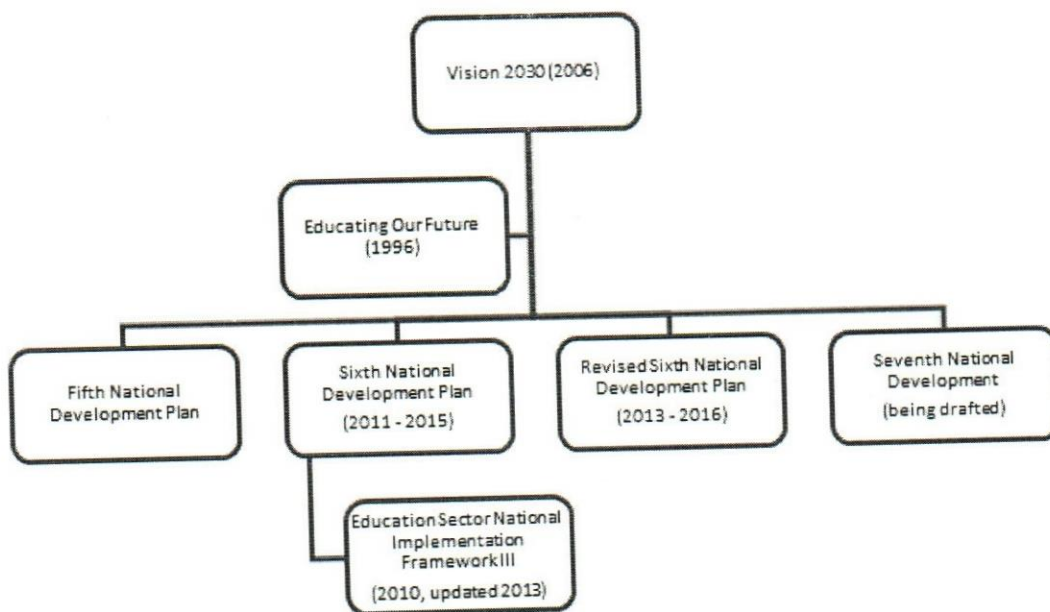


Figure 2.1: Zambia's Educational Policy Framework

- Is education policy linked to a national development vision? How?

National policy making is informed by the Vision 2030 document, produced in 2006, which aimed to transform Zambia into a prosperous middle-income country by the year 2030. This has been operationalized in a range of policy documents: the Fifth National Development Plan, the Sixth National Development Plan (to run from 2011 to 2015) and the Revised Sixth National Development Plan, necessitated by a change of government in 2011 (to run from 2013 to 2016). A Seventh National Development Plan, to run from 2017, is currently being formulated.

- Is there a suite of policies that provide a conducive operating environment? What are these and how do they articulate?

Zambia's educational policy making since the 1990s, has conformed to the liberal democratic principles promoted by international development partners and hence, formed an effective framework for cooperation between internal and external stakeholders. Policy documents provide justification for the mobilization, allocation and utilization of resources in order to further educational development. This ensures that donors from outside the country find the policy climate to be very supportive of their efforts. For example, *Educating Our Future* states that 'the Government will create conditions that allow the human, financial and other resources under the control of private and voluntary agencies, communities and religious bodies, to be channeled without hindrance into the education sector' (p5). Officials interviewed cited the Fast Track Teacher Education Program, operated under the auspices of DFID, JICA and other bilateral partners, as an example of an initiative which withstood wide-ranging changes in the political and economic landscape of the country, and described Zambia's education sector as remarkable in terms of being conducive to foreign and domestic interventions. A DFID progress report in 2015 stated that 'one strength of the (Education Sector Budget Support) Programme is the openness of engagement in the education sector' (p1).

- What is the status of this policy framework? Is it up-to-date? Is it in process of review?

The 1996 *Educating Our Future* document is currently under review. However, analysis of the revised draft reveals that there are no significant changes from the liberal principles that underpinned the original document, or the commitment to supporting the participation of co-operating partners in the education sector. Rather, the review incorporates new pieces of legislation and some subsidiary policies that have been passed since 1996, and has an emphasis on educational quality as well as provision, in line with the Sustainable Development Goals agenda.

Changes in the political landscape have not translated into far-reaching structural changes in educational policy and practice: the national policy on education has remained largely unchanged through four different Heads of State since 2001.

There are a number of significant issues facing secondary education in Zambia. Firstly, the Education For All initiative, aimed specifically at primary education, resulted in a lack of investment in secondary education. At the same time, the success of this initiative (97% net enrolment rate in primary education in 2013) has led to a huge increase in the number of pupils now attending primary school who then wish to carry on their education at secondary level. The organization of education is also changing, from a system of 'Basic' education from 1st to 9th grade followed by a three year 'High School' education, to a more traditional primary school, running from 1st to 7th grade, followed by a five year secondary education, divided between junior secondary (grades 8-9) and senior secondary (grades 10-12). Free and compulsory education is now being extended beyond primary school, with 7th grade graduates in 2016 being guaranteed a place in a junior secondary school for the first time, whereas in the previous system only approximately one third of students were admitted beyond grade 7 (Ministry of Education 1996). This massive and ambitious expansion in the numbers of pupils within the school education system creates huge challenges for the infrastructure. 47 new secondary schools have recently been built, adding capacity for 21,000 students in grades 8 – 12, but schools are still using shift systems to accommodate all of the extra students and overcrowding is still a major issue. The World Bank estimates that there is only space for 30% of the current grade 1-5 students in secondary education, and there will need to be a more than six-fold increase in education spending if the goal of universal secondary education is going to be realized (World Bank, 2016, p54). The AfriMAP discussion paper (Beyani 2013) found that 'progress is being made in secondary education but it is far too slow and out of pace with needs and plans including Vision 2030, which aims to make Zambia a middle-income country' (p28), with the skills and education levels attained by the population being insufficient to sustain the growth of a viable middle class - although this problem may be addressed in part by the introduction of the new curriculum (see below).

At the same time, a new National Curriculum is being implemented (Curriculum Development Centre, 2013), as there was a general feeling that the old curriculum was not appropriate, with not enough focus on employability and skills and the curriculum being too narrow and academic, especially at secondary level. There was particular concern about the lack of vocational and practical education and the poor pass rates in Mathematics, Science and practical subjects. This new curriculum, developed in consultation between the MESVTEE, other government departments, the Examinations Council of Zambia, Universities, Colleges of Education, NGOs, Civil Societies and Civic and Traditional Leaders, is being rolled out year-on-year in each type of school (primary, junior secondary and senior secondary) from 2014 onwards. It allows for a two-tier system at secondary level, with approximately 40% of comparatively weaker students expected to follow a more

vocational educational pathway and approximately 60% of comparatively stronger students expected to follow a more academic pathway. The possible pathways are shown in fig. 2 below:

CAREER PATHWAYS AT SECONDARY SCHOOL

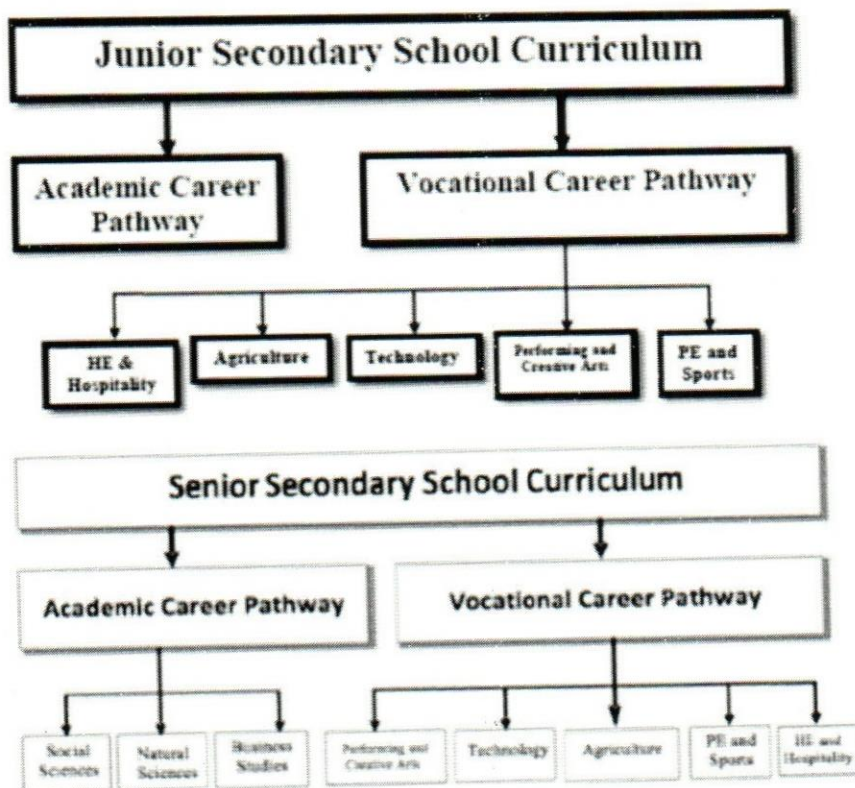


Figure 2.2 - possible career pathways at secondary school (source: Curriculum Development Centre, 2013, p35 and p40)

Each secondary school will be expected to offer two of the Technical and Vocational options. Students will be expected to make their choice about which career pathway to follow approximately one month after starting at Junior Secondary School. It is not clear whether there is room for moving between career paths at any point, or if there will be communication and negotiation between schools to ensure a range of different options are offered within the same geographical area.

'Entrepreneurship' is included at all levels of the educational system as a cross-cutting theme. At secondary level, this takes the form of integration of Entrepreneurship Education into both career pathways at Junior Secondary level and the vocational career pathways at Senior Secondary level, with the emphasis on learners running small business projects in groups. Senior Secondary schools are expected to prepare their learners for 'Tertiary Education and the world of work' (p38).

This tiered system is currently being piloted in two schools in each of Zambia's ten provinces, and one Special Education school in each province. The unit in charge of the formulation of the curriculum is the Curriculum Development Centre (CDC), a quasi-autonomous institution under the Ministry of General Education.

In terms of pedagogy, the National Curriculum strongly advises a 'Learner Centred Approach in the teaching and learning process' (p56). This approach is also emphasised in the Standards and Evaluation Guidelines document (MESVTEE, 2015), which addresses the commitment of the Zambian government to Child Friendly Schools as part of a SADC initiative, supported and promoted by UNICEF. 'Active, child-centred learning' is one of the main elements of this approach, with teachers expected to use 'innovative classroom practices' and 'multiple learning opportunities' to improve the learning of their students (p16). This was partly a result of the success of the Lesson Study approach to CPD (see section C1, below).

A2. Government commitment to secondary education

- Is there an increasing proportion of education budget spent on secondary education?

The government budgetary allocation to secondary education has displayed a perpetual downward trend since the early 1990s. Although there are additional needs that are emerging at secondary level, these have not been matched by proportionate increases in the secondary budget in education. A case in point is the revised curriculum that introduces hitherto unknown subjects such as computer studies. These innovations have not been marked by a proportionate increase in the budgetary allocation to the secondary education sub-sector.

The World Bank reports that Zambia spent 5.2% of its GDP on education in 2014, and planned to allocate 20.2% of its total budget to education in 2015, comparing it favorably with other African countries (World Bank 2016, ch2). Secondary education accounted for between 8 and 13% of education expenditure (although this is complicated by these figures only including Grades 10-12, as Grades 8 and 9 are still included under the 'Basic' school designation). At tertiary level, there is relatively low spending on education for vocational students, even compared to secondary school students (World Bank, 2016, p42).

- How has the secondary education share of budget changed over time?

The R-SNDP shows that the predicted secondary education budget fluctuates over time. The highest amount is ZMK 200,252 million (USD 38.55 million) in 2013, with the lowest being only ZMK 47,559 (USD 9.2 million) in 2014. This is despite the fact that income from foreign aid was predicted to remain relatively stable.

Schools are supposed to receive grants from central government each month, which are irrespective of the size of the school. These grants are often late or do not arrive at all. Many schools then charge additional fees to make up the shortfall (Beyani 2013 p63).

- Are there positive enrolment trends (disaggregated by rural/urban, gender, disability, region etc) in secondary education? Show how these have changed over time.

The enrolment patterns show how far Zambia is from universalising even Junior Secondary despite dramatic increases in numbers enrolled. In 2015, the national GER in Grades 8-12 was only 45.4% (although this figure shows a positive trend, increasing from 28.7% in 2008 and 32.32% in 2014, and

is on a par with the 2014 SSA average of 43%). The GPI is 0.85 - almost identical to the SSA 2014 average of 0.86. This problem of low enrolment is compounded by the disproportionate numbers of primary and secondary schools. As figure 2.3 below (extracted from the Ministry of General Education 2015 Educational Statistical Bulletin, MoGE 2016) shows, there are approximately 8800 primary schools in the entire country, against only 832 secondary schools across the country. On average each province has approximately fifty government-owned, privately run or mission-aided secondary schools, while primary schools are reported to number around 800-1000 per province. As stated previously in section A1, above, even the most accelerated expansion of the secondary sub-sector, via construction of new secondary schools or upgrading of certain primary schools, is unlikely to meet the shortfall of secondary school places for pupils currently enrolled in primary schools in the medium to long term.

	Year										Avg annual growth rate 2006 - 2015	Percentage change 2014 - 2015
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015		
Total	7639	8013	8195	7639	8493	8362	8359	8801	8754	8804	1.1%	0.6%
GRZ/GA	4709	4918	4790	4709	4903	5016	5219	5420	5474	5699	1.7%	4.1%
Priv/Church	354	387	411	354	739	709	498	485	616	699	6.8%	13.5%
Community/Unknown	2576	2708	2994	2576	2851	2637	2642	2896	2664	2406	-1.3%	-9.7%

	Year										Avg annual growth rate 2006 - 2015	Percentage change 2014 - 2015
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015		
Total	544	583	599	544	646	631	663	683	794	832	4.8%	4.8%
GRZ/GA	447	459	464	447	498	487	501	522	616	664	4.5%	7.8%
Priv/Church/Community	97	124	135	97	148	144	162	161	178	168	6.3%	-5.6%

Figure 2.3 – numbers of primary and secondary schools in Zambia

A3. Governance of education

- Does decentralization support governance?

Figure 4, below, shows the theoretical organization of school education in Zambia, highlighting the intended decentralization:

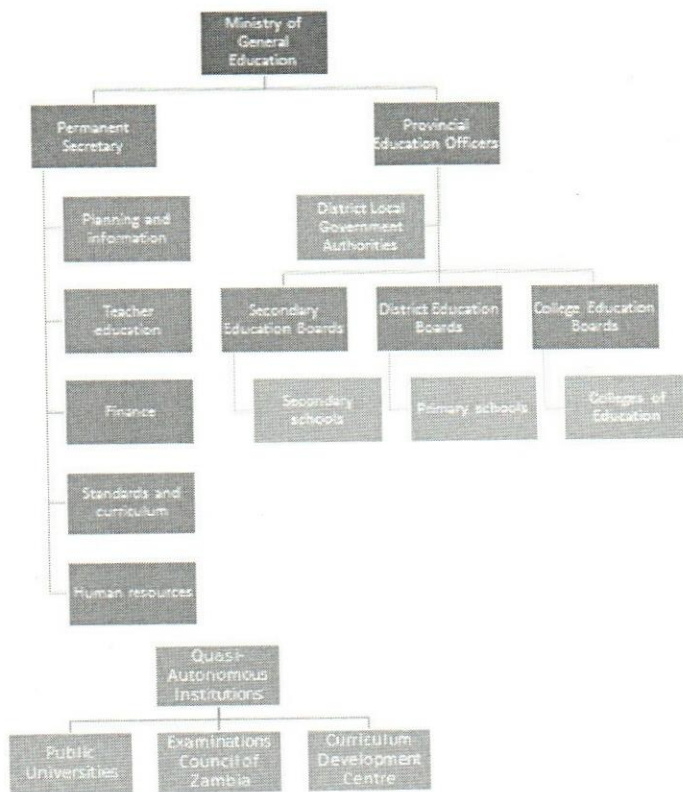


Figure 2.4 – Structure of School Education in Zambia

(Source: Director of Planning and Information-Ministry of General Education, Zambia)

The national policy on education proposes a robust decentralization of the education system, which will see all secondary and primary schools come under the direction of local government authorities, so-called district councils. However, this is yet to be realized. Secondary education is under the auspices of the Ministry of General Education (MoGE), with schools being run by Secondary Education Boards which report to Provincial Education Officers who report directly to the MoGE.

NB: In 2011 the Ministry of Education was merged with the Ministry of Science, Technology and Vocational Training to form the Ministry of Education, Science, Vocational Training and Early Education (MESVTEE). In 2015 this ministry was divided into the Ministry of General Education and the Ministry of Higher Education. Both Secondary Education and Teacher Education fall under the authority of the Ministry of General Education.

- What administrative/decision making powers been decentralized in secondary education, particularly with respect to teacher management and education?

Although decentralization is a critical cornerstone of national education policy, with the aim of promoting broad-based participation in the management of education and skills training, it has not been widely implemented. In reality, only early childhood education and adult literacy have been devolved to the district councils. Other attempts at decentralization have been abandoned due to

the misuse and misdirection of funds, sometimes due to the delays in payment of government remittances as mentioned above. Thus, financial management of most education sectors remains under central control.

Education Boards, though, do have certain functions, as specified in the *Standards and Evaluation Guidelines* document (MESVTEE, 2015b). In particular, they are responsible for employing and laying off staff, human resource development, and setting fees and other charges levied on students.

- Is there parental and community involvement in learning? What is the nature of this involvement?

As part of the decentralization policy, responsibility for education does not lie solely with the government, but should also involve local communities. They should participate in decision-making, especially in their role as custodians of school buildings. Additionally, the government supports community involvement as a way of facilitating the collective rights of parents to choose the type of education their children will receive, as enshrined in the United Nations Declaration on Human Rights (UNHCR) and the *Educating Our Future* document, and as a way of reducing capital costs of, for example, constructing new school buildings. The Government of the Republic of Zambia, then, is heavily committed to parental and community involvement in learning.

This involvement takes a number of forms. It includes infrastructure development for schools which instills a sense of ownership of the educational enterprise: 'The Ministry has adopted the community mode of constructing schools (especially at primary education level) as it is about half of the total cost of construction using the contractor mode' (p13, Revised National Policy on Education). In addition, community participation comes in the form of Parent-Teachers Associations (PTAs) that have been extremely active in mobilizing resources for various services in schools, such as infrastructural development through construction of additional classrooms and teachers' houses. We note that in other contexts, this dependence on community-mobilized resources has been found to contribute to disparities in education quality (Zuze & Leibbrandt, 2011). AfriMAP (Beyani 2013) also found that PTAs are frequently involved in the resolution of problems between parents and teachers and act as a channel for addressing grievances relating to educational quality, such as teacher behaviour and the provision of learning materials (p96).

However, the failure of the decentralization policy means that much decision making remains at national level, without local community involvement. According to some stakeholders interviewed in this study, this local community involvement is also constrained by poverty and certain negative cultural practices. For instance, many years of a socialist approach to national affairs influenced many stakeholders to view the Central Government as having sole ownership of the school system. This led to over-dependence on the State and minimal sense of ownership of the schools.

- Are there functioning teacher unions and professional associations? How active are they and what roles do they play?

The largest teacher union is the Zambian National Union of Teachers – ZNUT. An evaluation report conducted in 2008 funded by NORAD (Malungo, 2008) found that ZNUT play a critical role in formulating education policy and informing union members about changes and developments (p8), but falls short in consulting members and in evaluating policies. In addition to ZNUT, there are other very active teacher unions in Zambia, whose membership coincides with the sub-sectors that constitute the pre-tertiary educational sector in the country: the Secondary School Teachers Union

of Zambia (SESTUZ), which includes teachers at junior and senior secondary school levels, the Primary School Teachers Union of Zambia (PETUZ), and the Basic Teachers Union of Zambia (BETUZ). All the teacher unions have representation in various policy-making organs in the education sector. Each of the teacher unions are, for instance, represented in the Teaching Council of Zambia, the Examination Council of Zambia as well as in each of the Education Boards at college, secondary school and district levels. In addition, when the Minister of General Education constitutes District, Secondary and College Education Boards, the practice has been to include officials affiliated with the four teacher unions. Thus all Education Boards across the country have some form of representation from the unions.

The Teaching Council of Zambia, brought in by the Teaching Profession Act of 2013 (GRZ 2013) is the supreme regulatory authority for the teaching profession in the country. The Teaching Council regulates registration of teachers and their practice and professional conduct by developing appropriate standards of qualification and promoting continuing professional development. In addition, it accredits and regulates colleges of education. All teachers and teacher training institutions are legally required to register with and be accredited by the Council.

- Is there public debate on educational issues? Through which media is this debate conducted and who participates?

The *Educating Our Future* (Ministry of Education, 1996) document provided for the establishment of a research unit at the ministry to generate knowledge and drive discussion on issues affecting the country. However, this unit has not been fully developed, and thus debates on educational issues are not very common, according to one Ministry of Education interviewee. In spite of this, a number of pressure groups exist within Zambia that contribute to debates on matters of educational policy. For example, the decision to review the curriculum and to start teaching early years students in primary schools in a familiar local language was preceded by numerous discussions by stakeholders in the print and electronic media.

The active pressure groups include CAMFED, which advocates for the education of girls, and Zambia Open and Community Schools Society, which advocates for community schools and other non-government owned schools in the education sector. The Forum for African Women Educationists, Zambian Chapter (FAWEZA) also carries out some advocacy around girls' education. The Zambia National Education Coalition (ZANEC) runs media campaigns about educational issues, for example the level of education funding, and also maintains an active social media presence. The AfriMAP discussion paper (Beyani 2013) found that 'education NGOs are on the whole respected by government and have a good working relationship' (p11).

- Do systems of school supervision and inspection support professional development? How?

The *Standards and Evaluation Guidelines* in April 2015 (MESVTEE 2015b) establish the minimum standards for educational inputs, processes and outputs across all education sectors. This document identifies inadequate and inappropriate training of teachers and ineffective school management and supervision as factors which contribute to the low performance of learners, and aims to provide an overall quality improvement framework to address these issues, amongst others.

In line with the decentralization policy, described above, teacher CPE is delivered through Teachers' Resource Centers, and the document specifies the equipment requirements for each level of Resource Centre (provincial, district and school). Head teachers and Education Standards Officers are

directed to identify the CPE needs of staff by using a set of criteria (e.g. poor performance of learners in tests and examinations, need for a teacher to handle a higher grade in the same subject area). The identification process is not linked to the appraisal process.

The guidelines set out the time frame for inspections and appraisals, stating that schools should be inspected annually, and that teachers should have their performance appraised annually, although their teaching and planning should be inspected termly.

According to the ministry official in charge of standards and evaluations, public and private secondary schools are subjected to the same evaluation guidelines. Regular visits are made by Standards Officers, attached to Provincial and District Education Offices, who use either the Institutional Monitoring Instrument (which cover school infrastructure, safeguarding of students, staff qualifications etc.) or the Teacher Monitoring Instrument, which inspects the quality of teaching by examining lesson plans, schemes and records of work and carrying out lesson observations.

Unfortunately, low staffing levels and the length of time that each evaluation takes (be it for an individual teacher or a whole school), and the fact that Standards Officers are additionally responsible for primary schools and colleges of education, make it extremely hard for secondary school evaluations and monitoring visits to be carried out regularly.

- Does an effectively regulated private sector contribute to secondary education?
- What proportion of the secondary school student population are enrolled in private schools?
- How does private school quality and cost compare with public sector?
- Who has access to private secondary schools?

As stated in section A1, above, the GRZ welcomes private investment in education as part of its liberal democratic policy framework. In addition, it recognizes that the private sector can supplement the quality and quantity of education supplied by the state, which does not have the resources to fulfill its mandate to supply this to the whole population. Hence, *Educating Our Future* encouraged and welcomed the creation and operation of private institutions of learning by private individuals and organizations. According to the Teaching Profession Act of 2013 (GRZ 2013) and the *Standards and Evaluation Guidelines* (MESVTEE 2015b), private learning institutions must register with MESVTEE every year, and successful registration is dependent on the proprietor fulfilling certain conditions. Failure to register such an institution is an offence.

According to the 2015 Educational Statistical Bulletin (MoGE 2016, p20), there are 832 secondary schools in Zambia. Out of these approximately 168 (20.19%) are privately run. There is a lot of diversity in the character and quality of private secondary schools catering for various types of learners. A sizeable proportion of private schools serve very needy children from highly impoverished homes (*Educating Our Future, Revised Edition, 2015: 13*). There are also private schools that service comparatively wealthy and privileged families. The latter types of schools have high standards of learning and teaching. Still other private schools are accessible to learners whose parents have a preference for education that is different to that offered in government institutions and are able to pay the fees levied. Although the private schools are normally administered under private charter on both a for-profit and non-profit basis, they are held to the same standards of evaluation as government schools, as stated previously. The frequency of these inspections range from termly to yearly although constraints on staffing occasionally mean a year can pass without the inspections taking place. The recently created Teaching Council of Zambia has increased the

inspection of teachers in both private and public schools to ensure that only qualified individuals hold positions of responsibility in the schools. According to the Registrar of the Teaching Council, a number of under-qualified teachers have been discovered and their dismissal, training, re-training or upgrade recommended. Overall, the combination of private and public secondary education is seen by the government as very enriching to the sub-sector as it allows logistical, material, monetary and technical resources in the private sector to be utilized in advancing the education of children in Zambia.

The recent expansion of Low Fee Private Schools (LFPS) run by international chains has yet to hit Zambia, although Promoting Equality in African Schools (PEAS), which works extensively in Uganda, has recently established two schools close to the city of Ndola (PEAS website: <http://www.peas.org.uk/>).

A4. Conduciveness of operating environment

- Does a stable political environment allow for sustainable change? Explain frequency of government change and indicate the pace of change introduced by new governments.

The most recent elections were in August 2016, when the ruling party, the Patriotic Front, and the President, Edgar Lungu, were re-elected by narrow margins. Although there were some outbreaks of violence, the elections were found to be free and fair by international observers. Elections to the office of president as well as parliamentary representatives in 150 constituencies are held every five years. Generally, as detailed in section A1, above, the political environment is conducive for change. In spite of relatively frequent changes of government since 2000, political changes have largely left educational efforts uninterrupted. Interviews with outside agencies confirm the stability of the policy environment. Thus, there exists a generally stable political environment which can allow for sustainable change.

- Are there low levels of corruption and transparent government? How is this monitored and by whom?

There is an active Anti-Corruption Commission, established in 1980, which uses legislation (the Anti-Corruption Act No. 3, 2012) in the fight against corruption. Much of its work is conducted jointly with Transparency International Zambia (TIZ) (<http://www.tizambia.org.zm/>). TIZ produces regular media updates relating to its work against corruption. Both organizations have an active social media presence.

Afrobarometer (<http://www.afrobarometer.org/>) reports that public trust in Zambian institutions is increasing, with 59% of those surveyed believing that 'elections enable voters to remove leaders from office' (2015) and 68% perceiving 'no or only some corruption' in government and local government officials (2013).

- Is there resilience to natural disasters/emergencies? What are the indicators of this?

Zambia is not a high-risk country for natural disasters/emergencies. Most hazards are experienced locally. However, climate change appears to be causing an increase in the occurrence of floods and drought in certain areas, and this may continue to increase in the coming years.

National policy relating to natural hazards has recently shifted away from reactive risk management towards pro-active risk reduction (Disaster Management and Mitigation Unit, 2015a). The policy is supported by a Disaster Management Operations Manual (Disaster Management and Mitigation Unit, 2015b), which lays out roles and responsibilities in the event of a natural disaster occurring.

The Copperbelt, historically one of Zambia's wealthiest regions, has been suffering socio-economic decline due to decreasing price of copper on international markets. Also, since the 1990s, the withdrawal of mining companies from social welfare provision has increased the fragility of livelihoods in some urban communities (Mususa, 2012).

B. Need Criteria

B1. Quality of secondary education

- What are the completion rates for lower secondary?

The extent to which secondary school entrants proceed to complete their education, or completion rate, is among the key indicators for assessing the quality of education. Zambia's completion rate for junior secondary education in 2015 was 57.3% (55% in 2014 - GEM report 2016), while for the same period completion of senior secondary was only 30.8% (MoGE 2016) (27% in 2014 - GEM report 2016). These low completion rates at the secondary education level suggest that the quality of secondary education is poor and needs to improve. However, these rates compare favourably with the average for SSA of 31% for lower secondary and 15% for upper secondary (GEM report 2016).

- What are the junior secondary to upper secondary transition rates?

The junior secondary to upper secondary transition rate for 2015 was 46.2%, an increase from 42.2% in 2014 (MoGE 2016). The low transition rates may be due to high failure rates at lower secondary level, resulting in low eligibility for an upper secondary education, or to a lack of capacity at upper secondary level; the data does not indicate which of these reasons applies in this case.

- What are the numbers of out of school adolescents?

325,000 adolescents were out of school in 2014 (GEM report 2016).

- What are the disaggregated performance trends in national assessments?

More evidence of the poor quality of secondary education can be found in the low pass rates at grades 9 and 12, shown in figs. 5 and 6 (MoGE 2016). At grade 9, fewer than 50% of candidates pass the examination, and at grade 12 only 57.05% pass. This percentage has fluctuated around the same level over the last three years. The AfriMAP discussion paper (Beyani 2013) suggested that this poor quality is due to high pupil teacher ratios, unavailability of teaching and learning materials, inadequate teacher qualifications, insufficient contact time between pupil and teacher and the poor

motivation level of teachers, due to their poor conditions of service and insufficient and inadequate teacher housing (p31).

An additional explanation for the low pass rates at secondary level described above can be found in the 2015 EFA review (MESVTEE 2015a). This report examined the quality of primary education, and found that 80% of students are unable to read by the end of first grade, and that primary teachers lack the skills to take corrective action as these students move up through the grades. It also found that only 20% of those who start primary education currently graduate from secondary school. It can be assumed that students in receipt of a poor quality primary education will struggle when they reach secondary level, and this poor foundation will contribute to low pass rates in national assessments.

	Numbers sat			Certificates					
	Male	Females	Total	Male	Female	Total	% Male	% Female	% Total
National	141 336	136 848	278 184	71 435	64 558	135 993	50.54	47.17	48.89
Provinces									
Muchinga	6 407	4 912	11 319	3 557	2 560	6 117	55.52	52.12	54.04
Northern	8 806	6 423	15 229	4 484	2 931	7 415	50.92	45.63	48.69
Luapula	8 513	6 614	15 127	4 718	3 851	8 569	55.42	58.22	56.65
Southern	17 012	16 168	33 180	7 829	6 935	14 764	46.02	42.89	44.50
Eastern	12 024	10 104	22 128	6 500	4 634	11 134	54.06	45.86	50.32
Copperbelt	25 599	28 537	54 136	14 468	15 458	29 926	56.52	54.17	55.28
N/ Western	9 401	8 018	17 419	4 762	3 887	8 649	50.65	48.48	49.65
Central	16 034	15 062	31 096	7 155	6 433	13 588	44.62	42.71	43.70
Western	9 024	8 027	17 051	4 886	4 661	9 547	54.14	58.07	55.99
Lusaka	28516	32983	61499	13076	13208	26284	45.85	40.04	42.74

Figure 2.5 – examination pass rates in Grade 9

	Numbers sat			Certificates					
	Male	Females	Total	Male	Female	Total	% Male	% Female	% Total
National	70585	57942	128 527	69108	56578	125 686	59.26%	54.35%	67.05%
Provinces									
Northern	3672	2206	5 878	3596	2156	5 752	61.35	53.53	58.41
Luapula	3532	2375	5 907	3460	2308	5 768	57.17	49.61	54.14
Southern	6883	5375	12 258	6775	5256	12 032	70.28	68.87	69.66
Eastern	5956	3860	9 816	5842	3789	9 631	72.1	69.33	71.01
Copperbelt	17769	17538	35 327	17376	17138	34 514	47.43	41.44	44.46
North Western	4528	3179	7 707	4424	3095	7 519	53.98	49.6	52.17
Central	7141	5506	12 647	7005	5360	12 365	62.67	59.87	61.46
Western	3449	2729	6 178	3390	2654	6 044	53.1	51.77	52.51
Lusaka	14825	13389	28 214	14500	13096	27 596	63.49	60.4	62.02
Muchinga	2810	1785	4 595	2739	1736	4 475	64.55	62.21	63.64

Figure 2.6 – examination pass rates in Grade 12

Disaggregation by gender:

Nationally, more males than females pass the grade 9 examinations, although the difference is only 3.5% (MoGE 2016). Most of the provinces show a similar pattern, although in Eastern province there is a difference of more than 8%, and in Luapula and Western provinces more females than males pass.

A higher percentage of males also pass the grade 12 examinations, with approximately a 5% difference. The biggest differences are of around 8% in Luapula and Northern provinces.

Disaggregation by province:

The highest percentages of candidates, 56.65% pass the grade 9 examinations in Luapula province, and the lowest percentage, 42.74%, pass in Lusaka province (MoGE 2016).

Variation in the pass rates for the grade 12 examinations is much higher, with Eastern province having the highest rate of 71.01% and Copperbelt province having the lowest rate of only 44.46%. There appears to be little correlation between the levels of poverty found in a province and the examination pass rates.

B2. Quality of teacher education

- What are the levels of trained teachers at secondary level?

Approximately 58% of secondary teachers have a teaching diploma, whilst an additional 10% have a teaching certificate. Almost 25% have a degree level qualification. Less than 1% have no professional qualification (MoGE 2016).

The policy of the Ministry of General Education in Zambia has been that only degree holders or graduates from public or private universities are qualified to teach at senior secondary level, while diploma holders and holders of lower status degrees should be restricted to teaching at junior secondary school level. However, owing to the limited number of degree awarding institutions in Zambia, and the fact that subjects such as agricultural sciences and industrial arts are not offered at degree level for teachers, teacher output at this level has failed to satisfy demand. To compensate for this shortfall, teachers who are only qualified to diploma level are often required to teach at senior secondary school level throughout the country. This may have a detrimental impact on the quality of their teaching, particularly on their knowledge of the subject matter in the senior secondary school curriculum.

In addition, not enough teachers are trained in certain subject areas. This shortage of graduate teachers is experienced most acutely in mathematics and science, where teacher output is extremely low. In order to address the acute shortage of mathematics and science teachers in secondary education, the government, with the support of bilateral development partners such as DFID, JICA and USAID, launched a Fast Track Teacher Education Programme (FTTEP) in 2011. The FTTEP was aimed at bolstering the supply of highly skilled teachers, particularly in the critical areas of Industrial Arts, Mathematics and Science. The FTTEP has continued under the auspices of the University of Zambia, but recently private universities have also been contracted to help to strengthen the programme.

There is an additional problem of very high teacher attrition. In 2015, more than 8,000 teachers left the teaching service, while only approximately 5,000 new teachers were recruited. Rates of attrition seem to be similar for primary and secondary schools (MoGE 2016). Unfortunately, the data makes it impossible to ascertain teachers' reasons for leaving the profession. However, the AfriMAP discussion paper (Beyani 2013) suggests that poor teacher motivation due to poor teaching conditions, lack of housing and poor wages (generally 20-30% lower than in similarly qualified occupations) all cause these high attrition rates, and points out that it makes the profession unsustainable when the cost of training teachers who then do not deliver education is factored in to the equation (p78). Attrition rates are particularly high in rural areas where living conditions are

worse and there is a serious shortage of teaching materials (p82). High attrition rates inevitably have a negative impact on the quality of education offered by schools, not only because of the resultant higher PTRs but also because the profession is losing its more experienced practitioners who could be major drivers in quality improvement.

The Zambian government recognises that attrition is a major problem in the teaching profession, and also acknowledges that retention problems are not only related to low status and salaries. As long ago as 1996, the Educating Our Future document (Ministry of Education 1996) suggested strategies for the reduction of teacher wastage such as improving teachers' housing, supplying funding and plots of land to enable teachers to build their own houses (pp120-121) and giving teachers from rural areas priority in in-service training programmes (p115). A Commonwealth report into in-service education in sub-Saharan Africa (Ibn Junaid and Maka, 2015) stated that Zambia is one of the few governments that had strategies to retain teachers, such as paying rural hardship allowances, and decentralising the procurement of teaching and learning materials to allow schools to decide on their own priorities. These initiatives, though, have had little impact on the rates of attrition.

- What is the quality of initial teacher training?

The commitment of the Zambian government to Child Friendly Schools as part of a SADC initiative, as detailed in section A1 above, presents new challenges for the delivery of Initial Teacher Training (ITT) and Continuing Professional Education (CPE). The Director of Teacher Education and Specialized Services (TESS) in the Ministry of General Education, indicated in an interview that there were low levels of satisfaction with the intensity and quality of ITT in the public and private universities in Zambia. Presently the University of Zambia (UNZA) in Lusaka, the Copperbelt University (CBU) in Kitwe, Mukuba University (formerly Copperbelt Secondary School Teachers College (COTSECO) in Kitwe, Kwame Nkrumah University (formerly Kwame Nkrumah Teachers Training College) in Kabwe and Mulungushi University (formerly the President's Citizenship College, PCC) near Kabwe are the public degree awarding institutions that produce teachers for upper secondary (grades 10-12). The feeling of TESS is that these institutions have curricula that are content-heavy, with minimal or negligible training in the newly adopted learner-centred pedagogy and other aspects of teaching craft. Graduate teachers from UNZA, for instance, receive only 8% pedagogical content throughout their degree training. Out of thirty-three and a half courses that a student teacher needs to complete in order to graduate, only three courses are in relevant methodology, the rest being content in such subjects as Chemistry, Physics, Biology, History, Geography and Religious Studies. Interviewees suggested that the Zambian system could narrow this training gap by offering a Post-Graduate Certificate in Education which aims to build on the knowledge gained by graduate teachers in natural or social sciences by adding pedagogical nuances to their training, as is done in other countries.

This lack of focus on pedagogy is partly due to the characteristics of the teaching staff in the colleges of education. Individuals who teach in these colleges do not receive specialized training in teacher education, but instead rise 'through the ranks' by way of promotion from a classroom teacher (sometimes in lower primary) all the way up to the rank of teacher educator. Thus, they may have limited exposure to learner-centred pedagogy themselves, and find it difficult to deliver such techniques to the trainees. To address this challenge, the university of Zambia, School of Education has recently introduced a Bachelor of Teacher Education (B.T.Ed) targeting individuals who wish to work as teacher educators in the colleges of education. The first cohort from this program are yet to graduate, however, so the impact of the program cannot as yet be ascertained.

Private universities involved in teacher education include: Zambia Adventist University (ZAU) at Rusangu, near Choma; Catholic University in Kalulushi; Zambia Open University (ZAOU) in Lusaka; DMI St Eugene in Chibombo; and Copperstone University in Kitwe. However, as the curricula of these institutions are modeled along Bachelor of Science and Bachelor of Arts system, with emphasis on content knowledge, their pedagogical content is similarly minimal.

- What is the amount and quality of CPE available to teachers?

The *Educating Our Future* document clearly states the need for regular ongoing development of teachers, with ITT being little more than the start. It envisages that CPE will be demand driven and based in schools themselves or local Resource Centres. This demand driven and localised CPE is further emphasised in the *Standards and Evaluation Guidelines* (MESVTEE 2015b), as detailed in section A3 above. In 1998 the Ministry of Education set up SPRINT (the School Programme of In-service for the Term), which was a project to develop regular meetings between teachers of the same grade or subject in different schools in order to swap best practice (Baba and Nakai, n.d.). This eventually developed into the JICA funded SMASTE (Strengthening Mathematics, Science and Technology Education) project (see below).

On the ground, Continuing Professional Education is actualized through a structured system in the Ministry of Education. Each province has a Provincial Resource Centre and each district has a District Resource Centre. Each district also has several zonal resource centers that represent several clusters of schools within the district. These resource centres are in charge of the local CPD needs of the teachers. Provincial Resource Centre Coordinators (PRCCs) and District Resource Centre Coordinators (DRCCs) man these centers. This system is illustrated in figure 2.7, below. It is obviously designed to deliver the type of CPE envisioned in the policy documents described above.

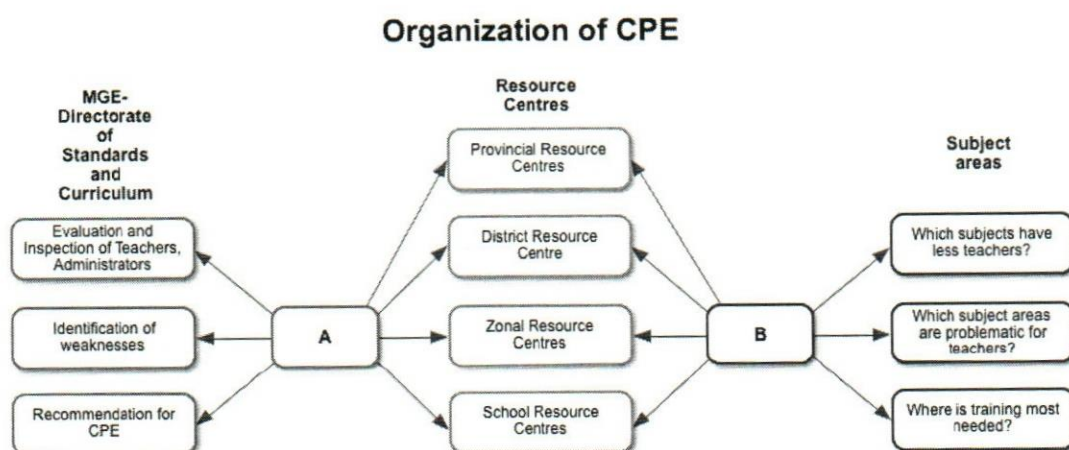


Figure 2.7 – CPE organisation

- What are the priority areas for CPE?

The priority areas for continuing professional education are defined by three primary considerations. Firstly, there is an acute shortage of qualified teachers of science, mathematics and technological subjects especially at secondary school level, compounded by a surfeit of social science teachers,

especially in urban secondary schools. To deal with this, according to a Principal Education Standards Officer (PESO) at Ministry Headquarters, professional development matters that are connected to science and mathematics and technical subjects tend to receive priority over the other subject areas. Secondly, CPE is informed significantly by the findings and evaluation reports of Education Standards Officers who visit the secondary and primary schools countrywide and evaluate the standards of teaching and, as need be, recommend further professional development for under-performing teachers (as detailed in section A3 above). Sometimes CPE takes the form of in-service training by way of refresher courses and may occasionally include prolonged training culminating in the academic and professional upgrade of affected teachers. Thirdly, CPE is informed by fluctuations in teacher supply, which sometimes results in teachers teaching outside of the phase or subject for which they were trained. When this occurs, CPE is used to equip such teachers with the additional skills needed to succeed in their new roles.

Interestingly, there is no specific focus on CPE to develop a child-centred learning pedagogy, even though this is essential to the delivery of the new curriculum and the Child Friendly Schools initiative. Presumably it would be included in the needs identified by the Education Standards Officers, and it is at the heart of the SMASTE Lesson Study programme (see below), which is becoming integral to CPE across secondary education in Zambia.

- Is there evidence of the impact of CPE?

There is no statistical data to show the evidence of CPE, but evidence of its popularity can be found in the steadily growing number of teachers that are upgrading their professional or academic profiles. The FTTEP is an example of a CPE initiative that has increased the supply of qualified teachers. Anecdotal evidence of the increased utilization of provincial, district and zonal resource centres that house in-house CPE for teachers in the Ministry of General Education also shows the impact of CPE.

- Comment on the above for Mathematics, Science and ICT

CPE in Mathematics and Science has been greatly enhanced by the JICA-funded SMASTE programme. According to a Brookings Institution report (Junget al, 2016), this has been extremely successful. It built on the SPRINT programme already being developed by the government, where teams of teachers from different schools met regularly to swap best practice, and used the Japanese Lesson Study model to 'deepen teachers' understanding of learner-centered teaching as well as to develop their capacities and skills to implement learner-centered lessons' (p7). It has been found to work well among teachers of Science and Mathematics, as it has great flexibility and uses teachers as agents of change rather than recipients of training, with the JICA input being restricted to technical assistance and overseas training of just over 400 staff. It was originally a two year pilot in one province (Central Province), but over three phases and ten years, it now covers 46,000 teachers in all provinces. The government has shown willingness to institutionalise the Lesson Study model for CPE by providing 90 percent of the funding, after the initial funding from JICA, and by including it in the National Implementation Framework III (Ministry of Education 2010 p25). It has had a positive impact on science examination results (in 2010, Central Province students pass rates for physics and chemistry were 12.4% higher and for biology were 19.2% than students from other provinces), and some teacher interviews revealed that participation in the project has improved their motivation and encouraged teachers to perceive themselves as lifelong learners rather than the finished article.

However, information from Zambian teachers participating in this research revealed that teachers of subjects other than Science and Mathematics, who are now implementing Lesson Study as part of

the scaling up of the project, are less happy with the programme, as it is time-consuming and teachers' workload is not reduced in recognition of this. Teachers in this third phase of the programme no longer feel ownership of the programme, but, rather, feel that it has been imposed by Ministry of Education Standards Officers via their inspection and advisory visits to schools. This unhappiness shows that the upscaling of programmes that have been very successful at smaller scales may not be a straightforward task.

The FTTEP Programme (see above) was implemented to respond to the critical shortage of teachers coming out of ITT in STEM amongst others. Additionally, the JICA-funded 'Project for Improvement of Pedagogical Content Knowledge: Linking Pre-Service and In-Service Education' (IPECK) project, which seeks to accelerate and improve the pedagogical aptitude of mathematics, science and ICT teachers by focussing particularly on the quality of ITT, also helps to illustrate the focus on teacher education in this area.

B3 Existence of significant disadvantaged / marginalised groups

- What are the overall levels of poverty?

According to the GEM report 2016, Zambia's GDP per capita is US\$1722, compared to the Sub Saharan African median of US\$1025. 62% of the population is living on less than US\$1.90/day. In UN terms, Zambia is a lower middle-income country.

The 2015 GRZ Living Conditions Monitoring Survey (CSO 2016) report gives the proportion of the total population living below the poverty line as 54.4%. The pattern of poverty in Zambia is characterised by a marked difference between poverty levels in rural and urban areas: 76.6% of the rural population live below the poverty line, compared to 23.4% of the urban population. This is a much larger difference than that found in, for example, Tanzania. Both of these figures show a slight decline since 2010.

The Gini Coefficient, a measure of inequality in a society where 0 equates to no inequality and 1 equates to maximum inequality, is at a relatively high figure of 0.69 for Zambia, an increase from 0.65 in 2010 (CSO 2016).

- How is poverty distributed by region, gender?

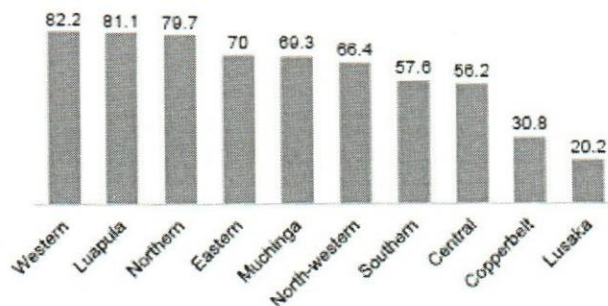


Figure 2.8 – Headcount poverty by province (from CSO 2016)

Poverty levels tend to be higher in provinces that are on the geographical periphery of the country, particularly to the north and east. This can also be seen in the map below, from the World Bank Zambia Poverty Assessment (World Bank 2012).

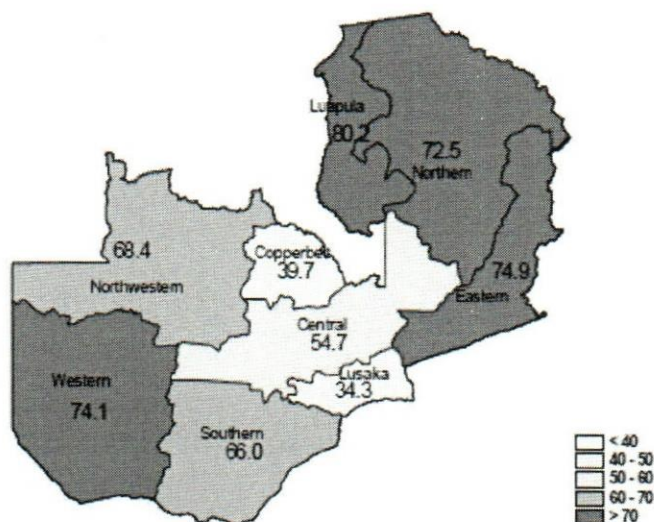


Figure 2.9 – Poverty Headcount Ratio (%) by province, 2010

NB: In 2011 a new province was created – Muchinga province, made up of five districts from Northern province and one district from Eastern province.

Figure 9 also confirms the rurality of poverty, with the two most urbanised provinces (Copperbelt and Lusaka) having by far the lowest levels of poverty.

The LCMS report found that 53.8% of the population found in male headed households was poor, compared to 56.7% found in female headed households. This slight but not significant difference was also recorded by the World Bank report in 2012.

In 2015, 1.2 million Zambians were living with HIV, with a 12.9% adult HIV prevalence. 63% of those who are in need of antiretroviral treatment were receiving it, and the life expectancy had risen from 49.4 years in 2012 to 58.1 years (data from AVERT website, www.avert.org).

- Are there particular disadvantaged or marginalized groups?
- What are the inequalities in enrolment, completion and transition rates by region, wealth and gender?

See data for enrolment rates by gender and region in section A2.

Transition rates:

National transition rates from primary to junior secondary school, and from junior secondary school to senior secondary school, for males and females are very similar, with slightly more girls than boys transitioning to junior secondary and slightly more boys transitioning to senior secondary (see fig. 9, from MoGE 2016). There are much larger differences between some of the provinces in male and female transition rates from junior secondary to senior secondary school. Again, the largest

differences are in the provinces in the peripheral north and east of the country, with the highest being Northern province, where 29% more males make the transition to senior secondary school compared to females.

	Grades 7-8			Grades 9-10		
	Male	Female	Total	Male	Female	Total
National	63.7%	65.5%	64.5%	47.4%	44.8%	46.2%
Provinces						
Central	68.8%	70.4%	69.6%	41.1%	39.1%	41.7%
Copperbelt	76.0%	80.7%	78.4%	53.6%	53.6%	54.2%
Eastern	60.2%	59.3%	59.8%	45.4%	36.5%	44.4%
Luapula	69.8%	69.6%	69.7%	51.5%	35.5%	48.9%
Lusaka	65.3%	63.6%	64.4%	45.8%	37.4%	41.5%
Muchinga	45.8%	42.2%	44.1%	60.7%	48.8%	59.0%
North Western	73.7%	74.1%	73.8%	51.0%	40.0%	50.0%
Northern	33.6%	39.8%	36.3%	83.9%	54.9%	72.8%
Southern	62.1%	62.2%	62.2%	33.6%	26.7%	31.9%
Western	68.5%	72.2%	70.2%	36.6%	36.9%	39.3%

Figure 2.10 – Transition rate by sex and province

Figure 10 also reveals that provinces with a lower transition rate to junior secondary school tend to have a higher transition rate to senior secondary school, and a larger difference between male and female transition rates. These provinces are again mainly in the peripheral north east – Northern, Muchinga and Luapula.

Completion rates:

Nationally, approximately 4% more males than females complete grade 9, and this increases to a 6% difference for grade 12 (fig. 11, below). There are large differences in completion rates between the provinces at both grades 9 and 12, ranging from 83.6% of Copperbelt learners completing grade 9 to only 23.7% of Northern learners doing so, and 67.4% of Copperbelt learners completing grade 12 compared to 16.5% in Northern province. The lowest completion rates for both grades again appear to be in the peripheral northeast. Completion rates are higher for males across both grades and all provinces, with the biggest difference being more than 13% at grade 12 in Muchinga province and the smallest being 0.3% at grade 9 in Copperbelt province.

	Grade 7			Grade 9			Grade 12		
	Male	Female	All	Male	Female	All	Male	Female	All
National	88.0%	83.8%	85.8%	59.6%	55.2%	57.3%	34.3%	27.4%	30.8%
Provinces									
Central	109.0%	107.8%	108.4%	74.7%	68.9%	71.8%	35.7%	29.2%	32.4%
Copperbelt	83.0%	85.8%	84.4%	83.8%	83.5%	83.6%	70.6%	64.4%	67.4%
Eastern	78.0%	70.8%	74.4%	42.1%	37.5%	39.8%	22.6%	14.7%	18.8%
Luapula	91.4%	75.9%	83.6%	55.7%	44.2%	50.0%	28.9%	22.0%	25.5%
Lusaka	82.9%	81.5%	82.2%	60.0%	53.8%	56.7%	31.5%	21.5%	25.9%
Muchinga	90.7%	70.3%	80.4%	37.7%	33.0%	35.3%	26.2%	12.8%	19.4%
North Western	107.9%	99.5%	103.8%	83.5%	70.8%	77.3%	44.4%	35.6%	40.0%
Northern	78.4%	64.9%	71.8%	24.8%	22.5%	23.7%	19.7%	13.2%	16.5%
Southern	90.6%	93.4%	92.0%	59.6%	55.3%	57.4%	22.4%	18.8%	20.6%
Western	83.2%	85.8%	84.5%	62.7%	61.1%	61.9%	25.8%	23.7%	24.7%

Figure 2.11 – Completion rates by sex and province, from MoGE 2016

Wealth:

Figure 12, below, shows that, while access to primary education is relatively equal across socio-economic groups, access to secondary and tertiary education are closely related to wealth. 41% of the secondary school beneficiaries are from the richest 20% of the population, with only 7% coming from the poorest 20%.

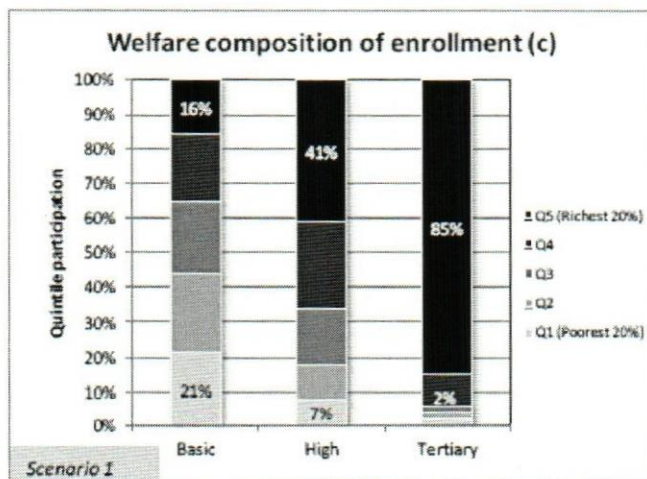


Figure 2.12 – percentage of each socio-economic quintile benefitting from each education sector (World Bank 2012)

- What are the inequalities in enrolment, completion and transition rates by region, wealth and gender?

The enrolment patterns are far from positive. In 2015, the national GER in Grades 8-12 was only 45.4% (although this figure shows a positive trend, increasing from 28.7% in 2008 and 32.32% in 2014). This problem of low enrolment is compounded by the disproportionate numbers of primary

and secondary schools. As figure 2.13 below (extracted from MoGE 2016) shows, there are approximately 8800 primary schools in the entire country compared to 832 secondary schools across the country. On average each province has approximately fifty government-owned, privately run or mission-aided secondary schools, while primary schools are reported to number between 700 and 800 per province. As stated previously in section A1, above, even the most accelerated expansion of the secondary sub-sector, via construction of new secondary schools or upgrading of certain primary schools, is unlikely to meet the shortfall of secondary school places for pupils currently enrolled in primary schools, at least not for the foreseeable future. The near-impossibility of achieving universal enrolment in the secondary sector may help to explain the increased government attention on the provision of high quality, relevant secondary education to those who do gain access to it.

	Year										Avg annual growth rate 2006 - 2015	Percentage change 2014 - 2015
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015		
Total	7639	8013	8195	7639	8493	8362	8359	8801	8754	8804	1.1%	0.6%
GRZ/GA	4709	4918	4790	4709	4903	5016	5219	5420	5474	5699	1.7%	4.1%
Priv/Church	354	387	411	354	739	709	498	485	616	699	6.8%	13.5%
Community/Unknown	2576	2708	2994	2576	2851	2637	2642	2896	2664	2406	-1.3%	-9.7%

	Year										Avg annual growth rate 2006 - 2015	Percentage change 2014 - 2015
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015		
Total	544	583	599	544	646	631	663	683	794	832	4.8%	4.8%
GRZ/GA	447	459	464	447	498	487	501	522	616	664	4.5%	7.8%
Priv/Church/Community	97	124	135	97	148	144	162	161	178	168	6.3%	-5.6%

Figure 2.13 – numbers of primary and secondary schools in Zambia

Disaggregation by gender:

Female enrolment in grades 8–9 increased at a faster annual growth rate 2010–15 than male enrolment, but in grades 10–12 male enrolment increased more quickly over the same period. It is thought that the drop-off in female enrolment is due to a significant number of older female students leaving education due to pregnancy (World Bank 2012, p32).

In all provinces, there was a higher GER for males than females in grades 8–12, with the biggest differences being in Luapula province (almost 10%), Muchinga province (almost 10%) and North Western province (over 11%).

The gender parity index in grades 8–12 has decreased from a high of 0.96 in 2009 to 0.84 in 2015. Again, there is wide variation between provinces, ranging from 1.04 in Copperbelt and 0.96 in Western province to 0.76 in Muchinga and Northern provinces and 0.78 in Luapula (these three latter provinces are geographically clustered).

Disaggregation by province:

There are big differences between GER in grades 8–12 in different provinces, ranging from 71.1% in Copperbelt and 64.5% in North Western province to only 23.9% in Northern Province. Lusaka province has a relatively low GER of 39.7%.

Disaggregation by disability:

96% of children with Special Educational Needs who are in education are in the primary sector, showing a very low transition rate from primary to secondary education for these children.

Disaggregation according to wealth/poverty:

The data provided by GRZ is not disaggregated in this way, but the World Bank poverty assessment report, published in 2012, found that poorer students are 'locked out' of secondary education by fee-paying requirements, with only 23% from the poorest quintile attending secondary school compared to 60% from the richest quintile (data from 2010) (World Bank 2012).

C. Operating Environment Criteria

C1 Engagement in secondary education and teacher education by other donors

- Who are the key development partners active in secondary education and teacher education and what programmes are they involved in?

Financial support from external donors has fallen a lot in recent years, for a number of reasons. Firstly, the government which gained power in 2011 declared that it would only need 4% of its budget to come from donor organisations in the future, leading to a number of organisations withdrawing funding as they decided it could come from elsewhere. In addition, Zambia has recently been judged to have attained lower middle income status, leading donor organisations to consider other countries to be more deserving of assistance. Unfortunately, this re-designation was swiftly followed by a collapse in copper prices, which produced a downturn in the national finances.

The AfriMAP review states that some donor organisations have also been somewhat critical of the effectiveness of cooperation and dialogue in the education sector, as a reaction to the slow response of the government in dealing with irregularities in other sectors and the lack of progress towards targeted budget support. All these factors contributed to a decrease in the contribution to the education budget from donors from 38% in 2005 to only 5% in 2012 (Beyani, 2013, p103). Data from the Global Education Monitoring report (GEM 2016) confirms these findings, but also shows a recent uptick in donor funding for secondary education from US\$ 1 million in 2013 to US\$ 2 million in 2014.

- Which secondary education development plans are externally funded?

The Co-operating Partners (CPs) working in education have tended to focus on primary education almost to the exclusion of secondary education. USAID for instance targets children aged between 1-16 years, which automatically excludes the senior secondary level. So far only JICA has had extensive involvement in secondary education through the SMASTE project, detailed in section B2 above.

DFID and JICA have also committed huge sums of money towards the FTTEP (see section B2, Quality of Teacher Education, above) which seeks to upgrade the qualifications of teachers who hold diplomas and certificates to degree holders so that they can teach mathematics, science and technology in senior secondary schools, thereby helping to mitigate the shortage of qualified teachers at this level. Recently, JICA has also introduced a 'Project for Improvement of Pedagogical Content Knowledge: Linking Pre-Service and In-Service Education' (<https://www.jica.go.jp/project/english/zambia/009/outline/index.html>) (IPECK), which is working with primary and secondary schools and three Colleges of Education to train mathematics and science teachers, produce schemes of work and teaching materials (including textbooks), conduct

workshops, and develop a training package to disseminate the programme more widely. As the title suggests, there is a particular focus on pedagogic content knowledge.

C2 Conducive environment for and openness to innovation

- Are there opportunities for educational innovation?
- Which actors are involved in innovative efforts?
- How are innovations supported and shared? What exemplar innovations are there to learn from?

The stability and liberal nature of education policy, advances in technology, and the Lesson Study approach to CPE result in Zambia presenting great opportunities for innovation in education. The Chief of Party of one of the development partners involved in education said in an interview that the education system was ripe for system-wide innovations both inside and outside the classroom. Currently, the majority of these innovations are small scale, at single school or district level. Examples include Namwala Secondary School in Southern Province and Kaoma Secondary School in Western Province, who have pioneered educational innovations in pedagogical approaches and shown resourcefulness in the production of teaching equipment for Mathematics and Science. Groups of teachers at the Lusaka District Resource Centre, based at Lotus Basic School, have also been at the forefront of some exemplar innovations, including progressive methods of teaching Mathematics and Science.

The STEP-Up project, funded by USAID, is an example of a country-wide innovation that is reported to have instituted information management teams in most districts in Zambia, aimed at informing educational policy and practice through the use of applied research to improve pupil learning at primary level, particularly in literacy (Chemonics 2012). This use of data to track progress and identify problem areas could presumably be replicated at secondary level, offering another opportunity for an innovative project.

The use of District Resource Centres and the Lesson Study approach to CPE is particularly encouraging of innovation, as it uses the joint expertise of small groups of teachers to devise solutions to problems that they are experiencing. It is the scaling up of such innovations that is proving to be more of a challenge. The Ministry of General Education disseminate information about exemplar innovations to schools around the country and encourage others to implement them, and occasionally recognise teachers who spearhead such efforts by giving them awards. However, it is obvious that most innovations currently remain at school and district level.

- What are the opportunities to contribute to curriculum reform?

With the development of the new secondary curriculum have come many opportunities to contribute to curriculum reform. The Ministry of General Education through its Directorate of Standards and Curriculum, as well as a quasi-autonomous statutory body, the Curriculum Development Centre (CDC), handles curriculum development. The CDC in particular frequently solicits input from members of the general public into the curriculum in the quest for continuous improvement. For example, the recent decision to revise the primary curriculum in order to teach early grade literacy in a familiar local language was the product of nationwide conversations which afforded members of the public an opportunity to suggest what curriculum was best suited for the national school system.

In addition, input is also sought from development partners who have curriculum expertise. STEP-Up Zambia, in partnership with higher educational institutions in Zambia, has undertaken a series of applied research efforts culminating in a number of policy briefs, which recommend, among other things, a reform of syllabi in the primary schools as well as in teacher preparation at universities and colleges. These policy briefs have been widely disseminated and at least some of the recommendations have been adopted by central government. Thus, there are numerous opportunities to contribute to curriculum reform.

Conclusion

Zambia provides an opportunity for donors to engage with curriculum and pedagogy reform to which the government have shown a proven commitment, in spite of the challenging budgetary situation. In addition, government willingness to engage with outside agencies and commit funding to joint projects such as Lesson Study ensures the sustainability of such projects, even after the donor commitment finishes.

Government commitment to the continued expansion of the secondary sector is attested to by the recent guarantee made to all 2016 primary grade 7 leavers that they would be able to continue to grade 8 in secondary school. However, Zambia also has a very visible and large scale commitment to increasing the quality of secondary education. This commitment has two closely related elements: the new curriculum, and the Child Friendly Schools initiative.

Extend Lesson Study Project to support the Child Friendly Schools initiative

The Zambian government commitment to the UNICEF Child Friendly Schools initiative requires a new, learner-centred, pedagogy. This is the current focus of both Initial Teacher Training and Continuing Professional Education, with the adoption of the Lesson Study approach critical to its success. Lesson Study has been embraced enthusiastically by Zambian education professionals, especially in STEM subject areas, with changes to the original Japanese model which make it appropriate to the Zambian context. The challenge now is to extend this model, using the existing infrastructure of teacher resource centres at different levels, across more subject areas. A new donor could reinvigorate the Lesson Study project to motivate and engage teachers across the whole range of subject areas and experience to develop curricular and materials which have learner-centred pedagogy at their core. However, such a project would need to learn the lessons from earlier attempts to scale up Lesson Study, and may be hampered by the negative attitude that some teachers may have to Lesson Study in previous incarnations.

Support the new curriculum

Zambia's response to the challenge of increasing curriculum relevance, the introduction of vocational pathways and entrepreneurial education at all levels, offers more opportunities for donor investment. Results from the current pilot across twenty secondary schools should be forthcoming in the near future and should be used to plan the successful rolling out of this curriculum model across the country. The success of this curriculum could make an important contribution to the diversification and sustainability of the Zambian economy in the current climate of falling copper prices. Teacher training, development of curriculum materials and student assessment are all areas where donor contributions could have a major impact.

Improve teacher recruitment and retention

Government recognition of the problem of retaining experienced teachers, particularly in the more rural areas of the country, has so far had little impact on teacher attrition. This results in the most disadvantaged areas of the country having the least experienced and highest turnover of teaching staff. Innovative recruitment programmes and high quality CPE, using lessons learned from the FFTEP programme and Lesson Study, could make a real difference in this area. Use could be made of the Teachers' Resource Centres located throughout the country. A new teacher training programme aiming to recruit university graduates with excellent subject knowledge who could then complete a one year course focussing on teaching methodology and pedagogical content knowledge, modelled on Post-Graduate Certificate of Education programmes offered in other countries, may be an attractive option for a new cohort of graduates. The mechanisms of the newly instituted Teaching Council of Zambia could be developed and used to advocate for teachers, in addition to their current regulatory role. However, given the lack of success of other initiatives aiming to alleviate this problem, projects in this area are very risky and would require a long-term commitment, possibly not bearing fruit for up to ten or more years.

Strategic targeting of projects

Different areas of Zambia have very different needs. In rural areas with lower enrolment and completion rates, the challenge is to increase the relevance of secondary education and make it worthwhile for young people to attend school and gain an education. In urban areas, where enrolment rates are already high, teachers need to be equipped with the pedagogical skills to teach mixed ability classes, so that all students have the chance to achieve. Each area will require different initiatives depending on the prevailing issues, and establishing what these needs are would be a major task in itself.

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