



The Republic of Zambia
The Ministry of General Education
and
The Ministry of Higher Education

Education and Skills Sector Plan 2017-2021





Republic of Zambia

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ABBREVIATIONS AND ACRONYMS

7NDP	7th National Development Plan
AfDB	African Development Bank
AIDS	acquired immune deficiency syndrome
AMEP	Alternative Modes of Educational Provision (new name for YALE)
APR	Annual Progress Report
ASC	Annual School census
AU	African Union
AUCE	Advisory Unit of College of Education
AWPB	Annual Workplan & Budget
BAI	Book Aid International
BTL	Breakthrough to Literacy
CBMT	Competence-Based Modular Training
CBU	Copperbelt University
CDC	Curriculum Development Centre
CLC	Community Learning Centres
CP	cooperating partner
CPD	continuing professional development
CSE	comprehensive sexuality education
CSEN	children with special education needs
CSO	Central Statistics Office/civil society organization
CSTL	Care and Support for Teaching and Learning
CVRI	Central Veterinary Research Institute
D/VIP	double ventilated improved pit
DEB	District Education Board
DEBS	District Education Board Secretary
DFID	Department for International Development
DHRA	Department of Human Resources and Administration
DHS	Demographic Health Survey
DMC	Data Management Committee
DoDE	Directorate of Open and Distance Education
DPI	Directorate of Planning and Information
DS&C	Directorate of Standards and Curriculum
DSC	Department of Secondary Education
DVET	Department of Vocational Education and Training
EBS	Educational Broadcasting Services
ECE	early childhood education
ECZ	Examinations Council of Zambia
EGMA	Early Grade Mathematics Assessment
EGRA	Early Grade Reading Assessment
EMIS	Education Management Information System
EPPAD	Education Planning and Policy Analysis Department
ERS	Education Radio Services
ESA	Education Sector Analysis
ESB	Education Statistical Bulletin
ESPDG	Education Sector Plan Development Grant
ESSP	Education and Skills Sector Plan

ETVS	Educational Television Services
EU	European Union
FAWEZA	Forum for Women Educationalists of Zambia
FBO	faith-based organization
FDI	foreign direct investment
FT	full-time
FTE	full-time equivalence
G	Grade
G5NA	Grade 5 National Assessment
GA	Grant Aided
GCE	General Certificate of Education
GDP	gross domestic product
GER	gross enrolment ratio
GEWEL	Girls' Education and Women's Empowerment and Livelihoods
GIZ	Gesellschaft für Internationale Zusammenarbeit
GPE	Global Partnership for Education
GPI	gender parity index
GRZ	Government of the Republic of Zambia
HDI	Human Development Indicator
HE	higher education
HEA	Higher Education Authority
HESLB	Higher Education Student Loans Board
HIV	human immunodeficiency virus
HQ	headquarters
HR	human resources
HRA	Human Resources and Administration
ICT	information and communications technology
IEC	Information, Education and Communication
ILMD	Institutional Leadership and Management Development
ILO	International Labour Organization
IMF	International Monetary Fund
IP	implementation plan
IRI	Interactive Radio Instruction
JAR	Joint Annual Review
KGS	keeping girls in school
KPIs	key performance indicators
LCMS	Living Conditions Monitoring Survey
LSEN	learners with special education needs
MCDSS	Ministry of Community Development and Social Services
M&E	monitoring and evaluation
MDGs	Millennium Development Goals
MESVTEE	Ministry of Education, Science, Technology, Vocational and Early Childhood Education
METC	Monitoring and Evaluation Technical Committee
MHM	menstrual hygiene management
MIS	management information system
MLSS	Ministry of Labour and Social Security
MOE	Ministry of Education

MoF	Ministry of Finance
MoGE	Ministry of General Education
MoHE	Ministry of Higher Education
MoNDP	Ministry of National Development Planning
MoSP	Ministry of Education Sector Plan
MSTVT	Ministry of Science Technology and Vocational Training
MU	Mulungushi University
MYS	Ministry of Youth and Sports
NAF	National Assessment Framework
NAS	National Assessment Survey
NBA	National Biosafety Authority
NER	net enrolment rate
NGOs	non-governmental organizations
NIF	National Implementation Framework
NIR	net intake rate
NISIR	National Institute for Scientific and Industrial Research
NLAF	National Learning and Assessment Framework
NMEP	National Monitoring Evaluation Policy
NRSC	National Remote Sensing Centre
NSC	National Science Centre
NSTC	National Science and Technology Council
NTBC	National Technology Business Centre
OBB	output-based budgeting
ODA	official development assistance
ODL	Open and Distance Learning
OERs	Open Educational Resources
OVC	orphans and vulnerable children
PAF	Performance Assessment Framework
PAGE	Programme for the Advancement of Girls' Education
PCC	Projects Coordinating Committee
PE	personal emoluments
PER	Public Expenditure Review
PITC	Policy Implementation Technical Committee
PETS	Public Expenditure Tracking Survey
PHD	Doctorate of Philosophy
PIP	Policy Implementation Plan
PPP	public-private partnerships
PQTR	Pupil Qualified Teacher Ratio
PRP	Primary Reading Programme
PSMD	Public Service Management Division
PT	part-time
PTR	pupil:teacher ratio
QSDS	Quality Service Delivery Survey
R&D	research and development
RPA	Radiation Protection Authority
RPL	recognition of prior learning
rSNDP	Revised SNDP
S/VIP	single ventilated improved pit

SADC	Southern African Development Community
SAQMEC	Southern and East Africa Consortium for Monitoring Educational Quality
SDGs	Sustainable Development Goals
SEN	special education needs
SFP	Sector Performance Frameworks
SLR	Student: Lecturer Ratio
SNDP	Sixth National Development Plan
SPF	Sector Performance Framework
SPRINT	School Programme of In-service for the Term
SSA	Sub-Saharan Africa
STEM	science, technology, engineering and mathematics
STEP-UP	Strengthening Educational Performance-Up
STI	science, technology and innovation
SWOT	Strengths, Weaknesses, Opportunities and Threats
TA	Technical Advisor
TDRRC	Tropical Diseases Research Centre
TESS	Teacher Education and Specialized Services
TEVET	Technical Education, Vocational and Entrepreneurship Training
TEVETA	Technical Education, Vocational and Entrepreneurship Training Authority
TLM	teaching/learning materials
ToC	theory of change
TOT	Training of Trainers
TVET	Technical Vocational Education and Training
UNESCO	United Nations Education Scientific and Cultural Organization
UNICEF	United Nations International Children's Fund
UNZA	University of Zambia
US	United States
USAID	United States Agency for International Development
USD	United States dollar
WASH	water, sanitation & hygiene
WBT	work-based training
WBL	workplace-based learning
YALE	Youth and Adult Literacy Education (which is now AMEP)
ZACODE	Zambia College of Distance Education
ZANEC	Zambia National Education Coalition
ZAQA	Zambia Qualifications Authority
ZARI	Zambia Agricultural Research Institute
ZEMAT	Zambia Education Management Tool
ZESSTA	Zambia Education Sector Support Technical Assistance
ZIBSIP	Zambia Institute of Business Studies and Industrial Practice
ZIPAR	Zambia Institute for Policy Analysis and Research
ZLS	Zambia Library Services
ZMW	Zambian Kwacha
ZNBC	Zambia National Broadcasting Corporation
ZOCS	Zambia Open & Community Schools

PREFACE

The great motivation and driving thrust for this Education and Skills Sector Plan (ESSP) is firmly rooted in the national aspirations as articulated in Vision 2030 and the Seventh National Development Plan (7NDP). Vision 2030 underlines the importance of education as a critical prerequisite in the attainment of the various developmental goals in the plan. Equally the 7NDP, which has taken a radical departure from the previous development plans, also identifies education as one of the five critical developmental pillars that would enable this country to attain its medium- and long-term developmental goals. The importance of education in the 7NDP and indeed as a critical development strategy for the current Government cannot be overemphasized. Education is perceived to be an important ingredient in the socio-economic and cultural transformation of Zambia and thus is one of the priorities for the current Government.

In addition to being a critical investment strategy for present and future generations, especially in the era of predominantly knowledge-based economic development models, education is also a critical strategy in the 7NDP to redress a significant number of the identified binding constraints to national development.

Other factors influencing the development of this plan were the Sustainable Development Goals (SDGs), the Zambia Education Sector Analysis (ESA) and the Education Sector Diagnostic Studies that were commissioned to specifically provide inputs into this process. The ESA, which is a precursor to this document, is an elaborate analysis of the sector performance in the most recent past and highlights a number of achievements and major constraints that the sector encountered in the previous plan period. It also provides a broader contextual framework within which the previous education sector plans were implemented.

This plan also presents the macro-economic environment and the relevant trends over time. Within this broad appraisal of the macro-economic context, the general trends in proportionate allocations to education are reviewed, alongside how these allocations compare both with previous trends and other comparator countries. The Government of the Republic of Zambia (GRZ) places great value on ensuring that the education sector receives a fair share of national resources. Buoyant economic performance coupled with Government's commitment to improving the education sector has resulted in an appreciable increase in real terms of the education sector allocation.

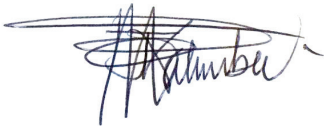
The main challenge that the education sector faces is that increased internal funding is not resulting in meaningful translation into raised quality of education or to more scientific innovation and research emerging within the education sector. Equally challenging and of grave concern to Government is the high rate of dropouts in the education sector and the absence of learning opportunities for those that were 'pushed out' from the system at either Grade 7 or Grade 9. It is the sincere hope of this Government that youths who did not have opportunities to continue with their education are still provided with opportunities to continue their education and/or have other pertinent skills developed in them. It is the hope of this Government that every learner not proceeding to Grade 8 or 10 should be provided with an opportunity to have their vocational skills, in line with their calling or persuasion, developed as the country remains in dire need of critical skills at various levels.

Other areas of focus for this plan include broadening of access and participation in early childhood education (ECE), whose importance cannot be overemphasized, as well as the creation of a machinery for constantly expanding the provision of primary education in line with increased demand arising from demographic imperatives. There is also greater need to devise innovative funding mechanisms for education while acknowledging that it is still a Government priority area of investment. These efforts will include the provision of incentives for the private sector, which is filling critical gaps in high-quality education as well



as expanding the spectrum for education and training levies as might be applicable as well as rationalizing the utilization of existing resources that contribute to wastage in the system. Of importance in this regard is the noticeably high rate of repetitions across all formal grades that, if reduced, would significantly reduce wastage and free up resources.

Additional efforts are needed to exploit the vast potential that new information and communications technologies (ICTs) provide in the provision of quality education, through improved system delivery and enhanced content delivery in the classroom. Furthermore the cornerstone that mathematics and science education provide must, and will, continue receiving due attention in the plan period.



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EXECUTIVE SUMMARY

1

1. EXECUTIVE SUMMARY

This Education Sector Strategic Plan (ESSP) is designed to re-establish education as the key catalyst for national development over the plan period and to help the country attain its long-term development vision. The ESSP will translate the GRZ's quest to deliver '**Quality and relevant lifelong education and skills training for all**' into pragmatic and integrated solutions that are driven by the realization that some intractable challenges, including various system distortions in the provision of education opportunities across sub-sectors, issues of curriculum relevance, teachers' skills and their supply across regions and subject matter, the weak development of foundational learning skills, and negative incentives that demotivate the effective management of education delivery, among others, will require problem solving and innovation to achieve the primary goal of improving quality through efficiency gains.

Operationally, the ESSP provides a compelling road map for attaining aspirations expounded in the Seventh National Development Plan (7NDP) and the global agenda represented by Sustainable Development Goal (SDG) 4. The 7NDP commits to ensuring that no citizen is left behind, particularly with regard to accessing education services. The 7NDP's integrated approach also provides a framework for coordinating contributions of other sector ministries, such health and community development and social welfare, in the implementation of the ESSP. Essentially, the ESSP is the principal mechanism for convening the contributions and influence of all stakeholders including the education sector's various unions, cooperating partners (CPs), non-governmental organizations (NGOs), faith-based organizations (FBOs), the private sector, local communities, parents and children themselves to help Zambia to meet its national and international commitments.

The strategic focus of the Ministry of General Education (MoGE) and Ministry of Higher Education (MoHE) in the ESSP combines the policy aspirations outlined in Educating Our Future, Science, Technology and Innovation Policy and Vision 2030. An integral part of the strategic approach is to ensure relevance in education across all levels of learning in order to equip young people with 21st-century skills and contribute to national development. The ESSP also builds upon the successes of, and lessons from, the Third National Implementation Framework (NIF III). Specifically, the ESSP builds on initiatives aimed at improving learning, such as the revised curriculum of 2014 that introduced a dual career pathway (academic and vocational) aimed at promoting a skills-based education and improving literacy instruction in the early grades.

The revised curriculum addressed enduring learning challenges manifested particularly in poor outcomes at all levels. For example, Zambia's Grade Five National Assessment (G5NA) results have shown consistently over two decades that children in primary education are not achieving the desired competencies. Regionally, the country has regularly ranked near the bottom in terms of the Southern and East Africa Consortium for Monitoring Educational Quality (SAQMEC) results.

Key factors associated with learning achievement challenges include:

- limited space that results in large class sizes that are beyond the capacity of teachers to teach effectively;
- low teacher skills and preparedness with less than 40 per cent of teachers routinely preparing lesson plans;
- teacher absenteeism in the region of 20 per cent;
- poor oversight of teaching and learning that reduces effective learning time; and
- the amount of grant the school received per child.

The quality and quantity of pupil–teacher contact remain a serious concern as, at three to four hours a day in primary education, learning time is at a premium. Poor educational outcomes particularly in the early grades led the government to introduce early childhood education (ECE) to mitigate the impact of poor learning experiences and socio-economic background on children's participation in the school system.

The MoGE has developed other responses to improve learning achievement, including a National Assessment Framework (NAF) and metrics to measure progress towards learning across all levels. This includes early grade reading and maths assessments that are designed to enable remedial instruction early in children's educational experience. As a complementary focus, the ESSP also embraces cross-cutting issues and factors that have a direct bearing on educational performance such as: water and sanitation, school feeding, menstrual hygiene management, HIV and AIDS, gender, insecurity, disability, orphans and vulnerable children (OVC), illiteracy and poverty.

With these considerations, the ESSP aims to improve the quality of education specifically by targeting improved learning outcomes through better leadership, oversight and accountability at all levels as well as overcoming system inefficiencies, in order to achieve the vision of 'Quality and relevant lifelong education and skills training for all'. Accordingly, the implementation of ESSP contains a comprehensive M&E framework which explicitly incorporates outcome measures that include learning, which will provide a basis to periodically assess progress towards the objectives of the plan. The M&E framework is developed around a results framework and broader theory of change (ToC) that links key priority actions on the basis of the four overriding themes of efficiency, quality, access and equity.

Given the government's constrained financial outlook over the strategy period, **the ESSP is driven by policy choices and actions that are realistic and address specific challenges** across sub-sectors, ensuring that no citizen is denied education on account of poverty, location, age, gender or disability. Thus, a moral imperative in the ESSP's design is that it will enable all Zambians to develop their knowledge and skills, manifest excellence in performance and moral uprightness, defend democratic ideals, and accept and value other persons on the basis of their personal worth and dignity, irrespective of gender, religion, ethnic origin, or any other discriminating characteristic. These aspirations shaped the formulation of the ESSP, and are also the principles that will guide its implementation.

The ESSP document is structured around guidance provided by the Cabinet Office for all sector strategic plans, and delivers a solid framework for the realization of the key strategic objectives identified through a broad-based consultative process to inform the plan's development. One of the significant challenges encountered in the development of this plan, however, is the fact that while the 7NDP envisions an integrated and sector-wide approach, the operationalization of the ESSP will be executed through two separate line ministries (MoGE and MoHE), each with separate mandates, budgets, governance and institutional arrangements, and different primary stakeholders.

It is therefore imperative that the MoGE and MoHE collaborate especially in areas where leveraging complementarities will advance the interests and mandates of both ministries. For example, the two ministries can establish a memorandum of understanding (MoU) to connect secondary school learners through technical education, vocational and entrepreneurship training (TEVET) institutions to vocational programmes and improve instruction. The products of this initiative may, in turn, be the prospective students of the TEVET sector. Individually, the two ministries are committed to execute their respective mandates with diligence, determination and an honest acknowledgement that the journey ahead of the ESSP will be difficult and unwavering resolve will be required if it is to achieve its set goals.

1.1 KEY ISSUES IN THE EDUCATION SECTOR

Macro-Economic and Public Finance Capacity

The macro-economic context for the ESSP is challenging as the government has embarked on austerity measures to scale back spending in the face of challenging debt servicing obligations. These austerity measures come at a time when the education budget has declined from over 20 per cent of the government's budget in 2015 to about 17 per cent in 2018. Education financing in Zambia, as in most countries, depends on two key variables that do not flow directly from education

policy itself, namely:

- i. The level of wealth of the country, measured by its gross domestic product (GDP); and
- ii. The state's capacity to mobilize a share of those resources (raised through taxes or other public levies) and the size of the share mobilized, and to subsequently invest a proportion of these resources into the education sector.

Zambia's GDP is slightly greater than USD 28 billion, while GDP per capita is slightly higher than USD 1,860.¹

Subsequent expenditure on general education can be categorized into three principal cost categories:

- i. staff and teacher salary costs, i.e. personal emoluments (PE);
- ii. school grants, i.e., education materials and the provision of primary and secondary education; and
- iii. infrastructure development costs, i.e., the construction, rehabilitation and maintenance of schools.

Currently the major proportion of education expenditure is on salaries of teachers and staff (89 per cent), followed by construction and upgrading of schools (7.5 per cent). The share of government education expenditure on technical education, vocational and entrepreneurship training (TEVET) is the smallest among education sub-sectors, and in 2017 it accounted for less than 1 per cent of total education expenditures. This has created challenges in higher education, as that component of the overall education sector remains heavily dependent on government financing.

The 2017–2021 macro-economic frameworks that informed the 7NDP are guided by a paradigm shift from sectoral planning to an integrated multisectoral development planning approach. It is therefore imperative to make projections of government expenditure on the education sector based on the GDP projections between 2007 and 2017.

Low Labour Productivity

Recent trends reflected in declining value addition in key sectors such as mining, manufacturing and agriculture indicate that labour productivity has been declining. There is a relationship between labour productivity growth and GDP growth, though current data show that labour productivity has been declining in Zambia despite relatively sustained (and substantial) GDP growth. It is envisaged that the ESSP's efforts to improve the quality of education will contribute to greater labour productivity in future, which in turn will reinforce sustained economic growth.

Rationale for the Education and Skills Sector Plan

The development of the ESSP has been precipitated and necessitated by a number of recent developments, most notably:

- In 2015, the Ministry of Education, Science, Vocational Training and Early Education (MESVTEE) undertook an institutional assessment to assess its performance and also to inform the development of the new strategic plan for the period up to 2020. The institutional assessment brought to the fore a number of important issues that needed to be addressed in the next sector plan;
- The overarching GRZ requirement to realign sectoral programmes and plans to the 7NDP as well as the country's electoral cycle; and
- The prioritization of the Education, Science and Skills Development Sector within the 7NDP as one of the key potential sectors for job creation and economic development in the country, making enhanced planning and performance in education a key cornerstone of the 7NDP's ambitions.

¹ Zambian Economic Indicator, 2017.

The Current Education Policy Framework

The policy framework for the education sector has its foundation in three key policy documents, which are:

- i. the Educating our Future Policy (1996);
- ii. the Technical Education and Vocational and TEVET (Skills Development) Policy (1998); and
- iii. the Science, Technology and Innovation Policy (1996).

All three policies, and the relevant legislation that underpins them, are currently being updated to reflect broader developments in the education sector, but all three still constitute foundational policy instruments upon which the ESSP has been formulated.

Institutional and Organizational Structure

Since independence in 1964, education in Zambia has been provided through ECE, primary and secondary schools. The Educating our Future Policy of 1996 ushered in a switch to a 4-9-3 structure, comprising four years of ECE, nine years of basic education and three years of high school education. For tertiary education, college education is between two and three years and a minimum four years for university degree level education.

While the country's policy stance in Educating Our Future reflected a global trend towards provision of basic education, the government confronted substantial challenges in making the shift to the new educational structure that the policy required.

With the change of government in 2011, there was again a shift in institutional structure of the MoGE to a 4-7-5-4 (ECE-primary-secondary-higher), reverting to a version of the structure that had been in place since independence.

Two-Tier Curriculum

In 2013, the MESVTEE reviewed the education curriculum in order to redefine the teaching content so that relevant knowledge, skills and values were incorporated into the curriculum. Besides redefining the teaching content, the ministry also introduced a two-tier curriculum for Grades 8 to 12. The two-tier curriculum ensures that learners can opt to pursue either an academic or a vocational career pathway at a secondary school level. While the ministry has made progress, implementation remains an ongoing task that will extend well into the life of this ESSP.

Decentralized Provision of Education

Decentralization has been a commitment of GRZ for many years, with the 7NDP prioritizing acceleration of this process, which has substantial implications for the education sector. The implementation of the National Decentralization Plan provides for the following in the education sector:

- Devolving ECE, primary education and Alternative modes of education provision (AMEP, formerly known as YALE) to local authorities, while retaining central responsibility for secondary and higher education, formulation of national policy and legislation, and oversight and coordination of the operations of statutory bodies and institutions, including education boards and university management structures; and
- Devolving key functions and powers to points of delivery, including fiscal decentralization, while providing central guidance on such issues as teacher recruitment.

Decentralization will therefore be a core driver of the emerging system development requirements for the ESSP, and in turn this will have major implications for other aspects of the system's structure and functions during the implementation period of the ESSP.

Changing Ministry Structures

In 2011, Government reviewed its structure and portfolios. This led to the merging of the Ministry of Education (MoE) with the Ministry of Science, Technology and Vocational Training (MoSTV) to form the MESVTEE. This was done in order to constitute one single, unified institution to efficiently and effectively handle all issues relating to education and training in Zambia.

However, due to non-acceptance of the new reforms by key stakeholders and the overload of work in one ministry, in 2016 Government again split MESVTEE into two: MoGE and MoHE.

MoGE is responsible for all issues related to ECE, primary, secondary and AMEP/YALE, while MoHE is responsible for higher education, TEVET and science, technology and innovation (STI). The function of teacher education (both pre-service and in-service) is still the primary responsibility of MoGE, although institutions within the structure of MoHE of course remain important providers of teacher training.

Governance Structure of the Education System

The two ministries have different governance structures. However, the current structures are likely to change as the government implements the Decentralization Policy, which will devolve responsibility to lower levels so that the two ministry headquarters themselves will concentrate on policy formulation and resource mobilization, while sub-national structures focus on education service delivery.

Internal Ministry Restructuring

In 2016 both ministries participated in a restructuring process led by the Cabinet Office intended to interrogate the strategic implications of their current structures and functions, as currently articulated in an organizational strategic plan for each ministry.

In the case of the MoGE this resulted in a proposed redesign of the organizational structure to ensure better alignment with the structure required by output-based budgeting (OBB), which was introduced in the ministry on a pilot basis in 2015.

The major implications of the proposed changes were to ensure that there was an organizational unit that could be held accountable for implementation of each of the main programmes of the MoGE. There was also an assessment of the staffing and institutional requirements, with some recommendations for reassigning personnel and strengthening some units.

1.2 EDUCATION SECTOR ANALYSIS

The ministries have been systematic in reporting against a very wide range of targets and indicators and have performed relatively well against the key policy and sector indicators in recent years. However, there have been challenges during the process of reporting, such as:

- There is very limited data available on ECE access and participation; and
- Access to primary and secondary school has expanded over the period, but only secondary education has grown at a rate faster than the population growth rate.

The increase in the number of primary schools over the last decade has corresponded with increased enrolment. The increase can be attributed to a combination of several factors, including: continuous infrastructure construction; continued implementation of the free primary education policy (re-introduced in 2002); implementation of a 50:50 enrolment initiative at entry Grade level (Grade 1); and/or implementation of the re-entry policy and the school feeding programme. Additionally, outside of government efforts, community schools have been a driver of growth in the primary school sector, accounting for almost a quarter of total enrolment.

The MoGE also continues to improve access to secondary education. However, growth in the sector falls far short of the targets envisaged under the third National Implementation Framework (NIF III). Transition rates remain very low with only about 65 per cent of learners transiting to Grade 8, and transition to Grade 10 is even lower at roughly 45 per cent. A key related challenge is a shortage of classrooms for Grades 8–12, and currently the student to classroom ratio is 75:1, when ideally it should be no higher than 40:1.

Of further concern is a declining gender parity index (GPI) for secondary education, which dropped from 0.96 in 2009 to 0.86 in 2016. It is difficult to pinpoint the exact cause of this drop, especially seeing as Government has implemented both the re-entry and 50:50 policies, and has also provided financial support to promote girls' attendance in secondary schools. Teenage pregnancies, which average about 15,000 annually, have, however, contributed to pushing girls out of schools. This ESSP takes specific measures through equipping teachers with guidance and counselling skills and delivery of comprehensive sexuality education (CSE) to try and stem the challenge of teenage pregnancies.

Quality and Learning Outcomes in School

Assessed in terms of measured learning outcomes, the evidence suggests that learning achievements of primary students did not substantially change from 2011 to 2015. Most of the standardized national, regional and international assessments highlight low learning achievement scores for a huge proportion of students in Zambian schools. This is despite the MoGE having worked with partners to develop the National Literacy Framework (NLF), designed to improve early grade reading.

A key challenge in improving learning achievement is ensuring that teachers are motivated and qualified to teach. Currently, teachers are in the classroom teaching about half the time they are scheduled to do so. Support and supervision of teachers is not performing as is required, and as a result teacher performance is significantly reduced. Among the other challenges highlighted as contributing to low achievement levels are:

- Progress in classroom construction has fallen well behind demand, and is not keeping pace with population growth;
- There is still a gender gap in learning performance, although the trend is positive and the gap is declining;
- There are differences in the infrastructure (including water and electricity) requirements to operate a school in either a rural or an urban setting; and
- Quality education provision for children with special education needs, while crucial in terms of ensuring equity, is nonetheless extremely costly and the limited availability of resources hampers full implementation of related policy intentions.

Access to teaching and learning materials and equipment continues to present a fundamental barrier to quality learning in all schools. The lack of equipment is also a key factor hindering the implementation of the two-tier system, especially in vocational subjects. Special education secondary schools are the most seriously affected by a lack of appropriate teaching and learning materials and equipment.

Additionally, the almost total absence of libraries in schools, and their marginalization in colleges, means that education tends to become equated with the contents of the textbook or with what the teacher expounds, with very limited opportunity for the learner to expand their understanding through library resources.

YALE/AMEP is one of the education sub-sectors whose overriding objective is to empower out-of-school children, youths and adults with basic literacy and functional skills to enable them to participate effectively in community and national development. However, provision of YALE/AMEP has faced significant challenges – one being inadequate funding, and another being the lack of substantive research or study to elucidate what approaches are most effective among YALE's different target groups.

Teacher Education

Progress has been made over recent years in improving teacher supply and qualifications. As of 2016, over 96 per cent of primary teachers (of whom 55 per cent are female) and 98 per cent of secondary teachers (44 per cent female) held the minimum academic qualification of Form V/ Grade 12 and a majority of primary teachers had a diploma in primary education while the majority of secondary teachers have a diploma in secondary education. However, fewer than 30 per cent of secondary teachers hold a degree.

In terms of subjects, the shortage of qualified teachers is most acute in science, technology, engineering and mathematics (STEM). There are also insufficient teachers available to teach children with special education needs in mathematics and science. This has resulted in these children not studying mathematics and science at both primary and secondary level.

Worryingly, the progress made in strengthening the pre-service teacher education system over the past five years has not translated into gains in learning achievement. A particularly concerning issue is that teacher quality remains low despite improved qualifications. For example, national assessments conducted at the fifth and ninth grade show that teachers are underperforming on the same tests administered to their learners. This ESSP aims to resolve this challenge through effective continuing professional development (CPD) at the school level, including the School Programme of In-service for the Term (SPRINT). Fundamentally, the ESSP seeks to realign the incentive structure for teacher professional development away from individual growth to the larger system interest of improving learning.

Teacher Management

The biggest challenge that the ESSP faces is resolving distortions in teacher allocation, particularly across rural and urban regions. Recent work by the MoGE on teacher payroll mismatch (i.e., teachers not teaching where they are officially assigned, receiving allowances to which they are not entitled, etc.) suggests that there is an urgent need for the development of systems which ensure that policies for teacher management are better implemented, and that where policies are no longer functional or relevant, they are updated or changed.

A second key problem is poor oversight of teaching and learning that leads to teacher underutilization. The 2016 Public Expenditure Tracking Survey (PETS) found that only 52 per cent of teachers were actually in classrooms teaching during school hours. Of the teachers present in school, fewer than 40 per cent turn up prepared to teach with a lesson plan. Absenteeism is another key concern, with almost 20 per cent of teachers routinely absent from school.

As noted earlier, while the supply of teachers has improved significantly at national level there are still challenges in terms of appropriate qualifications and competence. Improvements in the supply of teachers are skewed in favour of certain subjects, and Zambia still does not have enough teachers of science and mathematics, or teachers for key technical subjects (which now include ICT, plastering, carpentry, joinery, bricklaying, metal fabrication and electrical engineering). In regard to teacher competence, a significant number of teachers at community level, including 'volunteers', are both untrained and underqualified.

On the basis of current staffing formulae, the system is understaffed at all levels, particularly in the secondary levels. One reason for this understaffing is that the number of new teachers recruited has been lower than the number leaving through attrition in recent years. In terms of gender, women predominate among qualified primary teachers, while men are in the majority among qualified secondary teachers.

On teacher deployment, Zambia's teacher recruitment system has challenges. As it is centralized, deployment decisions do not always align with localized needs. There are also a number of other challenges in teacher deployment, including: a reluctance by teachers to work in hardship areas; insufficient housing provision; medical requirements of teachers with health issues affecting

deployment; and some communities' objections to unmarried female teachers taking up posts (citing a variety of reasons including religious and cultural ones). Consequently, urban areas have a disproportionately larger number of teachers – some of whom, unfortunately, are still on the payrolls of rural schools, so that these rural schools cannot hire new teachers.

Education System Data

Evidence-based decision making remains an area for improvement during the ESSP. While the MoGE has a comprehensive data and information system for effective planning, many decisions, for example on allocation of school infrastructure, are made in an ad hoc manner. The ESSP aims to ensure that information management is a vital ingredient for policy analysis and development.

The MoGE has undertaken several initiatives to improve data collection across the education sector. A key focus of the ESSP is to complement such efforts and use these strengthened data systems to ensure that education policy and practice is based on sound and rigorously developed evidence. A strategic focus of the ESSP on information management is to move towards real-time data systems to better address the needs of users.

Efficient Management of Education Sub-sectors

The eventual devolution of education functions to local authorities presents significant opportunities (as well as some threats) to increasing efficiency in the ECE, primary and AMEP/YALE sub-sectors. Groundwork has already been done in terms of legal frameworks, but the functions are yet to be devolved.

The ECE sub-sector will continue to face challenges in getting established during the ESSP. Financial constraints over the ESSP strategy mean that the sub-sector will need to leverage alternative modes of delivery to achieve its goal of extending access to many more learners, especially in rural areas.

A key challenge for primary education is low learning achievement, which is reflected in poor reading ability in the early grades. Barely 20 per cent of learners in Grade 1 are able to break through. Because of automatic promotion, the learners that fail to read are pushed on without a foundational learning skill. Poor management of learning time substantially accounts for the challenges in primary education. Currently, actual time spent in school is a source of substantial inefficiency (and inequity). Of great concern is the fact that only 3 to 4 hours a day are spent in classroom instruction in Grades 1–4 while Grades 5–12 spend on average 4.5 hours. This is despite the standards guidelines stipulating 5 and 6 hours respectively. Lack of classroom space hinders adherence to prescribed learning times.

The biggest challenge for secondary education is lack of space. Typically, less than 30 per cent of all learners who enter primary education go on to complete secondary education. The ESSP aims to use alternative modes (technology options and community engagement) to continue expanding access for secondary education.

For AMEP/YALE, a key challenge is how to present the sub-sector as a compelling alternative to traditional forms of education. The growing number of out-of-school children (estimated at around 800,000) could benefit from AMEP/YALE initiatives. The ESSP aims to improve the visibility of the sub-sector despite the reality that very limited funding is available to support alternative education.

University Education

The provision of university education in Zambia has evolved rapidly over the past decade. There is a varied array of public and private universities in Zambia, serving the needs of various sectors of the economy. The major focus in the NIF III for university education was increasing enrolments through formal and distance modes. The recent increase in enrolments in public and private institutions is a reflection of the increasing demand for university education in the country.

Among the key determinants of access to higher education are: the availability of infrastructure; the availability of lecturers and instructors; affordability; geographical location; performance in key subjects; career information; and guidance and counselling. However, high poverty levels are also a key barrier to access to higher education. Provision of bursaries to selected students at colleges, TEVET institutions and universities has not proved adequate to meet demand, and to overcome the barrier of poverty.

Gender is an equity concern for university education, with an overall female enrolment share of 47.4 per cent, while the enrolment discrepancy is more severe in science, technology, engineering and mathematics (STEM) courses. Factors that negatively affect female participation in university range from cultural to socio-economic. There have been various interventions in the sector over the years targeted at eliminating gender disparities, and to mainstream and achieve gender parity. In its efforts to promote gender equality in national development, GRZ adopted the National Gender Policy in 2000, which was revised in 2014.

Universities have faced a number of challenges, including: non-adherence to management systems; the absence of monitoring and evaluation (M&E) instruments; and inappropriate structures to provide oversight. In addition, insufficient financing has continued to affect the effective operation of public universities (PUs). The present method of financing higher education seems unsustainable for the long term, especially with the increasing demand for higher education. To improve operations of PUs, economic fees that reflect the real cost of providing university education need to be applied.

Universities are also expected to develop and improve strategies for widening their resource base through internally generated initiatives. To further improve the financial position of PUs, GRZ has developed a financing strategy to liquidate current debt and provide a sustainable financing solution for the future, including student financing through the Student Loans and Scholarship Scheme. Some public universities are using public-private partnerships (PPPs) to develop sustainable avenues for education financing.

Skills Development

The demand for skills development (TEVET) has been increasing over the years with the reservoir of prospective vocational learners coming from school leavers, employees (including employees in the informal sector), out-of-school children and retirees seeking re-skilling. With the development of the two-tier career pathway, the demand for skills development post-secondary is expected to increase even further.

However, access to TEVET is still affected by a variety of factors, including:

- The public perception of TEVET is problematic in that vocational education is considered by many to be a second choice to university education. This perception is reflected in the difficulty that most trade schools face in attracting students, because most courses offered are considered to be of low societal status, even though there are shortages of such professionals in Zambia and a clear demand from the labour market and economy; and
- Access to TEVET is also hampered by both the academic requirements and the qualifications offered. Some potential students are not accepted because their (non-formal) qualifications are not recognized, while for others the qualifications offered are too 'low' and TEVET offers too few opportunities to advance to university education, which remains the most desirable pathway for many potential vocational students.

TEVET institutions generally lack the physical infrastructure and skilled instructors to accommodate and train students with physical or mental disabilities, while their curricula are not in line with technological changes and industry skill requirements. There have been no institution-specific tracer studies to guide curriculum and course development. The sector has also faced a number of other challenges including: non-adherence to management systems; absence of regular M&E; and inappropriate structures to provide oversight.

GRZ has put in place various strategies to mitigate these challenges, including curriculum reviews to meet current industry needs, retraining of lecturers to upgrade their qualifications, equipping institutions with modern training materials and equipment, and efforts to rehabilitate existing infrastructure. Other interventions GRZ has put in place include enhancing regulation, coordination and monitoring functions, and enhancing the management capacities of the institutional heads through training.

Actual expenditures on TEVET in recent years have been less than 1 per cent of total government expenditure. In order to improve the financial viability of the TEVET system in Zambia, the Ministry of Finance (MoF) recently introduced a Skills Development Fund to address the challenges of inadequate skills among craft individuals, artisans, technicians and technologists. It is expected that this fund will receive finance from both the government and the private sector, and that this additional revenue stream will go some way towards securing enhanced TEVET outcomes over the duration of this ESSP.

Science, Technology and Innovation

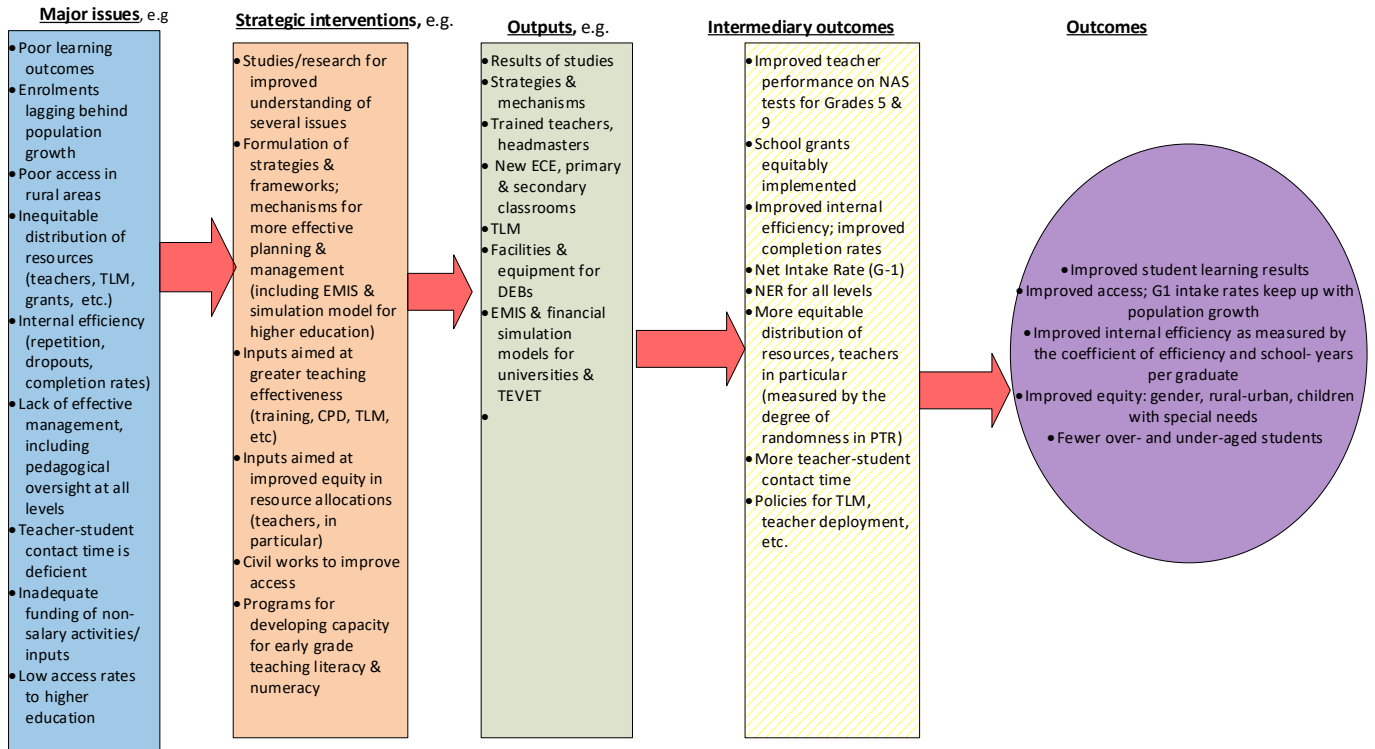
Science, technology and innovation (STI) functions in Zambia are domiciled in a number of line ministries. However, responsibility for the coordination of the sub-sector lies with the MoHE and, through it, the National Science and Technical Council (NSTC), which is the regulator of STI in Zambia.

STI has made marked progress over recent years; however, its contribution to national development has not been as pronounced as hoped and its impact on poverty reduction has been minimal. Some of the factors contributing to this low impact are inherent in the challenges facing STI today, which include: constraints in terms of skilled human resources; dilapidated laboratory infrastructure in public research and development (R&D) institutions; inadequate funding to STI; and inadequate quality assurance due to limitations in the effectiveness of both coordination and financing. Another major area of concern for STI has been in the field of professional and research ethics. At national level, issues of ethics have not been comprehensively addressed and the regulatory frameworks to ensure adherence to research ethics are weak.

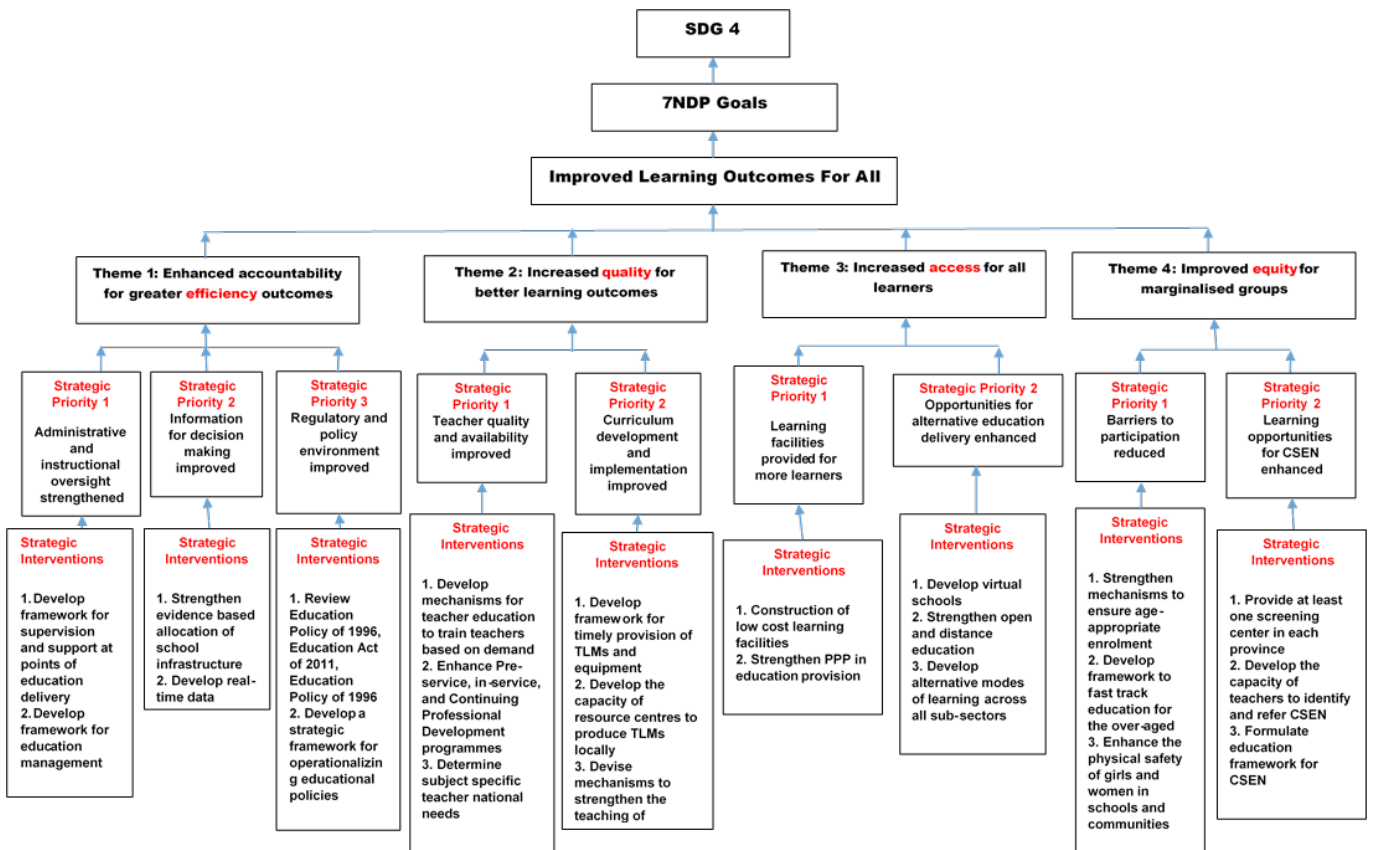
1.3 KEY ESSP 2017–2021 STRATEGIC PRIORITIES

The two figures below detail the guiding logic of the ESSP and provide an overview of how it is structured in order to attain its fundamental outcome, which is improved learning outcomes for all, within the broader contexts of Zambia's 7NDP goals and the international community's Sustainable Development Goals. The results chain shows how the ESSP moves from (i) an identification of the major issues to (ii) the identification of strategic objectives to (iii) outputs to (iv) intermediary outcomes to (v) a small set of outcomes (a couple of which could even be considered as intermediary). The ESSP results framework provides a highly synoptic overview of the interventions and priorities that address the ESSP's four themes (efficiency, quality, access, equity) designed to address the major, overriding goal of the ESSP which is to improve learning outcomes.

ESSP's results chain



ESSP Results Framework



The ESSP outlines in detail the significant challenges and opportunities summarized in these figures, and on the basis of that analysis proposes a comprehensive sector results framework and broader theory of change (ToC) which is linked to the 7NDP and SDG4 to which the ESSP will contribute.

The ESSP's ToC is underpinned by a comprehensive set of strategic objectives (linked to the key education themes prioritized in order of efficiency, quality, access and equity), which, in turn, comprise a discrete set of activities, programmes and interventions that will be undertaken during the plan period.

The key strategic priority areas of the ESSP by sub-sector will include:

ECE

- Expand the provision of suitable play and learning materials;
- Implement school readiness assessment;
- Implement child developmental milestones assessments;
- Establish internal quality assurance of ECE education delivery;
- Collaborate with communities to provide caregivers; and
- Establish model ECE centres.

Primary Education (PE)

- Improve quality of primary provision;
- Improve access and equity in the delivery of primary education; and
- Establish internal quality assurance of PE delivery;

Secondary Education (SE):

- Increase the number of classrooms in secondary education;
- Improve equitable recruitment and deployment of teachers especially those for science, technology, engineering and mathematics (STEM);
- Establish internal quality assurance of SE delivery; and
- Enhance comprehensive sexuality education (CSE) through guidance and counselling.

AMEP/YALE:

- Improve access to AMEP programmes;
- Improve quality to AMEP programmes; and
- Enhance equity through AMEP initiatives.

Teacher Education, Management and Specialized Services:

- Improve the responsiveness of teacher education to curriculum evolution;
- Strengthen the regulatory and quality assurance functionalities of the Teaching Council of Zambia (TCZ) as a way of maintaining and improving the quality and credibility of the teaching profession;
- Streamline the provision of teacher education to be responsive to national needs; and
- Enhance the efficiency and effectiveness of specialized services.

University Education

- Strengthen the regulatory functionalities of the HEA and Zambian Qualifications Authority (ZAQA) as a way of maintaining and improving quality and credibility;
- Increase the number of graduates on courses demanded by industry;
- Create an enabling environment for innovative ways of funding universities; and
- Develop a management information system (MIS) and a financial simulation model.

TEVET

- Strengthen the regulatory functionalities of TEVET as a way of maintaining and improving quality and credibility;
- Improve the management information system (MIS) on skills development;
- Develop a financial simulation model; and
- Enhance industry responsive curriculum development and review based on tracer studies and discussion with industry.

INTRODUCTION 2

2. INTRODUCTION

This Education Sector Strategic Plan for the period 2017 to 2021 aims to improve learning outcomes across Zambia's education system by resolving longstanding management and resourcing challenges in the provision of education services. As a result of these longstanding challenges, in the recent past the education sector has faced severe resourcing constraints, partly due to weak internal controls and capacities. This has led to a reduction in the external financing to education from above 25 per cent of the education sector budget to a meagre 2 per cent in 2018. In view of the prevailing macro-economic situation in the country, the additional GDP allocation to education that is envisaged in the plan period is not large enough to offset the financing deficit. The education sector therefore prioritizes the raising of efficiency levels as one of the key strategies that will ensure prudent use of scarce resources, as well as raising possibilities for increasing the resource envelope. If the critical binding constraints of weak public management and accountability issues are not adequately addressed, it is likely that few or no additional external resources will flow in the sector beyond the current paltry levels of under 2 per cent.

Notwithstanding these constraints, the ESSP's key overall objective will focus on raising the levels of learning outcomes. ESSP's first key priority theme is improving the education system's efficiency by implementing three strategic approaches: instituting robust oversight and management systems; ensuring evidence-based education management; and providing an adequate policy and regulatory environment. The second priority theme of the ESSP is improving quality through two strategic approaches: ensuring that qualified teachers are equitably available in sufficient numbers across all regions, with robust mechanisms to continuously update their skills and make sure that they are teaching; and matching supply of teaching and learning resources with curriculum requirements across subject areas (vocational, academic, STEM). The third key theme is improving access through two strategic approaches: improving the supply of educational infrastructure; and providing alternative opportunities for learning. The fourth key theme that the ESSP addresses is equity, through two strategic approaches that include: mitigating barriers to entry and ongoing participation of vulnerable learners in education; and addressing the requirements of children with special education needs.

Operationally, the ESSP provides the roadmap for attaining the aspirations expounded in the Seventh National Development Plan (7NDP) and the global agenda represented by SDG4. The 7NDP commits to ensuring that no citizen is left behind, particularly when it comes to accessing education services. The 7NDP's integrated approach also provides a framework for coordinating the contributions of other sector ministries, such as health and community development and social welfare, in the implementation of the ESSP. Essentially, the ESSP is the principal mechanism for convening the contribution of all stakeholders including the education sector's cooperating partners (CPs), non-governmental organizations (NGOs), the private sector, local communities, parents and children themselves to helping Zambia meet its national and international commitments in the sector, including, in particular, the Sustainable Development Goal for Education (SDG4).

The ESSP builds on the successes of, and lessons from, the Third National Implementation Framework (NIF III). Specifically, the ESSP builds on initiatives aimed at improving learning, such as the revised curriculum of 2014 that introduced a dual career pathway (academic and vocational) and aimed to improve literacy instruction in the early grades. The revised curriculum addressed enduring learning challenges that manifested particularly in poor learning outcomes at all levels. Zambia's Grade Five National Assessment (G5NA) results have shown consistently over two decades that children in primary are not achieving the desired competencies. Regionally, the country has regularly ranked near the bottom in terms of the Southern and East Africa Consortium for Monitoring Educational Quality (SAQMEC) results.

Key factors affecting learning achievement include limited space that results in large class sizes that are beyond the capacity of teachers to teach effectively, low teacher skills and preparedness – with less than 40 per cent of teachers preparing lesson plans, teacher absenteeism in the region of 20 per cent, and poor management of teaching and learning that reduces effective learning time. The

quality and quantity of pupil teacher contact remains a serious concern as, at three to four hours a day in primary, learning time is at a premium. In addition, lack of mechanisms to prepare and determine learners' readiness for school affects learning achievements. These poor educational outcomes, particularly in the early grades, led the government to introduce early childhood education (ECE) to mitigate the impact of poor educational environments and socio-economic background on children's participation and learning.

The strategic focus of the Ministry of General Education (MoGE) and Ministry of Higher Education (MoHE) combines the policy aspirations outlined in Educating Our Future, the Science, Technology and Innovation Policy and Vision 2030. An integral part of the strategic approach is ensuring relevance in education that is provided across all levels of learning so as to equip children with 21st-century skills and contribute to national development. The MoGE has also developed a National Assessment Framework and metrics to measure progress towards learning across all levels. This includes early grade reading and maths assessments that are designed to enable remedial instruction early in children's educational experience. As a complementary focus, the ESSP also embraces cross-cutting issues and factors that have a direct bearing on the educational performance such as: water and sanitation, school feeding, menstrual hygiene management, HIV and AIDS, gender, insecurity, disability, orphans and vulnerable children, illiteracy and poverty.

With these considerations, the ESSP aims to improve the quality of education specifically by appreciably improving learning outcomes at all levels, as well as overcoming inefficiencies, in order to achieve its vision of 'Quality and relevant lifelong education and skills training for all'. Accordingly, the implementation of ESSP contains a comprehensive M&E framework which explicitly incorporates outcome measures that include learning, which will provide a basis to periodically assess progress towards the objectives of the plan. The M&E framework is developed around a theory of change (TOC) that addresses key priority areas on the basis of the four themes of access, quality, equity and efficiency. Given the constrained financial outlook over the strategy period, the ESSP is driven by policy choices and actions that are pragmatic and address specific challenges across sub-sectors, ensuring that no citizen is denied education on account of poverty, location, age, gender or disability.

2.1 PURPOSE AND OVERVIEW

The principal purpose of the ESSP is to provide the education sector with a clear set of strategic priorities, based on a sound analysis of prevailing conditions and trends in the sector, whose attainment will ensure measurable progress towards quality and relevant education services in Zambia over the implementation period. However GRZ is also aware that, within the education sector, much international assistance is conditional on the existence of a 'credible education sector plan' that is linked to the national development vision and plan, and that meets internationally agreed criteria in terms of national ownership, soundness and relevance, coherence and feasibility. As such, GRZ recognizes that the ESSP provides a mechanism through which government resources and international assistance can be effectively channelled to realize mutually agreed goals.

The ESSP is structured around guidance provided by the Cabinet Office for all sector strategic plans. This structure includes an introduction that covers the background to the plan, the rationale, and the conceptual framework. The document also provides overviews of the context of the education sector as well as summarized sector analyses for the MoGE and MoHE, including capacity analyses and an infrastructure needs assessment. These sections, together with final chapters on education financing and the M&E framework, elaborate the strategic focus of the ESSP during the plan period.

2.2 ESSP FORMULATION PROCESS

The government initiated the preparation of this document in 2015 with a review of lessons learned from the previous education sector plan, the NIF III, which was developed as an implementation framework for the Sixth National Development Plan (SNDP). The ESSP's development process was undertaken in parallel to preliminary work on developing the 7NDP.

Building on the lessons derived from the NIF III and the SNDP, the government presented an initial Situation Analysis for the future ESSP to stakeholders and partners in June 2016. At this time Zambia had successfully applied to the Global Partnership for Education (GPE) for an Education Sector Plan Development Grant (ESPDG) to support the preparation of the ESSP.

The first volume of the 7NDP was published at the same time, and in preparation for these important planning processes both the MoGE and MoHE were able to: (i) conduct nationwide provincial consultations with key stakeholders to provide feedback on the initial situation analysis; (ii) undertake a set of diagnostic studies to provide additional information, evidence and analysis in areas of limited knowledge and key concern in the sector; and (iii) contract, through the GPE managing agency UNICEF, national and international technical assistance (TA) to support the plan preparation process.

The preparation of the ESSP itself followed a series of sequential steps, summarized below.

- i. The process that informed the ESSP included a range of quantitative and qualitative analyses, drawing on the comprehensive Education Situation Analysis (ESA). The ESSP development also included review of lessons from previous plans, especially the lessons from the SNDP and NIF III, which fed into a wide-ranging district- and provincial-level consultations to refine and elaborate the initial situation analysis, and to identify stakeholder concerns at the provincial and district level.
- ii. The information flowing from the ESA was combined with the five Sector Strategies and 26 Sector Programmes outlined in the 7NDP, and was finalized in June 2017. Subsequently, a team including planning officials from both the MoGE and MoHE, officials from the Cabinet Office and the Ministry of National Development Planning (MoNDP), national and international TA, and representatives from CPs, drawing on lessons from national and international experience and the ESA, prepared the framework of the Strategy.
- iii. Strategic priorities for the ESSP were subsequently agreed through an iterative participatory process involving multiple workshops that were attended by officials from both the MoGE (HQ, and school level) and the MoHE, facilitated by international and national TA to ensure focus and clarity in the eventual plan, and the priorities it proposes. The other stakeholders included the teacher unions, NGOs and CSOs.²
- iv. The relevant inputs from this process fed into a system simulation and cost projection model, generating a range of possible projected expenditure scenarios to provide a basis for further prioritization and finalization, and to provide a level of flexibility in the event of changing economic situations.
- v. A comprehensive M&E framework was developed to provide a basis against which GRZ and other relevant stakeholders could, collaboratively, track progress towards the prioritized objectives.
- vi. An implementation plan (IP) was developed to ensure that the ESSP provides a basis for annual planning at the sub-sector level, including annual work plans and budgets for each ministry.

2.3 KEY FRAMING DOCUMENTS

The ESSP builds on a number of key framing documents that have helped shape its direction and structure. The most important of these, and their relevance to the ESSP, are described briefly below.

7NDP

Zambia's long-term planning was articulated in 2012 in the 'Vision 2030', which envisaged Zambia as 'a prosperous middle-income nation by 2030'. The government seeks to achieve Vision 2030

² Reports, attendance lists and copies of invitation letters are available

through the implementation of a series of medium-term development plans, and the most recent of these (the 7NDP) is the Government of Zambia's five-year development plan to take Zambia towards fulfilment of that vision, covering the years 2017–2021.

The 7NDP is the principal document that provides the wider development framework for the sector plans, and includes key strategies, outcomes and outputs for each sector. The 7NDP uses an integrated approach to planning that is not structured around sectors – it encourages an integrated approach in sector plans to promote a sector-wide approach. It was envisaged that the 7NDP would be published in two volumes. The first volume was published in June 2017, and the second volume, which will provide detailed IPs for each sector, is now in the final stages of development. The 7NDP remains the touchstone and guiding document for the ESSP and is invoked regularly throughout the ESSP.

It is important also to note that although the ESSP will only be operationalized in 2018, its implementation cycle and duration (2017–2021) has been harmonized with that of the 7NDP, so as to ensure greater alignment to GRZ medium-term (7NDP) and long-term (Vision 2030) development planning.

Sustainable Development Goal 4

In September 2015, at the United Nations Sustainable Development Summit in New York, Member States including Zambia formally adopted the 2030 Agenda for Sustainable Development. The agenda contains 17 goals including a new SDG4 relating to education, which is **'to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all'**. It is against this global aspiration that the Zambian ESSP 2017–2021 locates its Vision of **'Quality and relevant lifelong education and skills training for all'**, although the ESSP vision is (as discussed above) equally aligned to the 7NDP's clear focus on skills development, vocational education and the resultant links to employment creation and national development.

SDG4 has a total of ten targets, and while the education elements of the 7NDP were framed with the SDG commitments in mind, they do not directly cover all the sub-sectoral targets of SDG4 itself. SDG4 has a target date of 2030, and the ESSP M&E arrangements ensure that relevant indicators are included to track Zambia's progress towards those targets in the period covered by the ESSP (2017–2021), to inform the development of subsequent sector plans to guide Zambia towards the targets intended by 2030. The SDG4 targets and indicators are listed in Annex 1.

Zambia Education Sector Diagnostic Studies

With support from the GPE ESPDG four diagnostic studies were commissioned to address significant data and information gaps identified in the 2016 Initial Situation Analysis. These were focused on the following themes:

- equity;
- out-of-school children;
- teacher management; and
- financing of higher education.

The findings of these studies are incorporated into both the ESA and the ESSP, and ensure that both the Education Sector Analysis (ESA) and the ESSP adequately addressed these four crucial elements of effective education planning.

Zambia ESA

The GPE appraisal criteria for Education and Skills Sector Plans require that they are based on a recent and comprehensive ESA and since the last sector analysis in Zambia was conducted in 2010

(for the SNDP), Zambia ensured that the ESPDG included provision to support preparation of an updated and thorough ESA. The ESA was completed in early 2018, and has provided a sound basis on which to inform strategic decisions about the medium-term education strategy in Zambia outlined in this ESSP. (Note that the ESSP does not replicate all of the comprehensive data and analysis emerging from the ESA, but rather summarizes, re-presents and draws upon its most relevant analysis and key findings as well as the key issues identified in the analysis.)

Other relevant sectoral policy frameworks

The ESSP also takes into account Zambia's cooperation with other countries in the region reflected in, among other international agreements, the African Union's (AU) Agenda 2063 and the Southern African Development Committee (SADC) Protocols on Education. Other relevant considerations included aspirations outlined in the Education Policy and Education Act that are under review.

2.4 LESSONS FROM PREVIOUS EDUCATION SECTOR PLANS

In addition to reviewing the strategic context derived from 7NDP, the ministries also reviewed the lessons learned from previous sector plans, including the following: the MoE Strategic Plan 2003–2007, later referred to as the NIF I; the NIF 2008–2010 (NIF II); and then the NIF III 2011–2015, which was subsequently extended to 2018.

This internal review of the NIFs has shown a number of weaknesses. Prominent among them are those summarized in Box 2.1; these lessons have been taken into account in the development of the ESSP.

Box 2.1. Lessons learned from previous sector plans

1. The plans have been activity-based and have lacked a clear theory of change.
2. The NIF III was overly complex with targets that could not be achieved.
3. The cost projection model was not well aligned with activity targets.
4. Tracking of progress on the implementation of the NIF III was hampered by data limitations.
5. The NIF III was widely perceived as relevant mainly to planning officers.
6. The NIF III did not provide an adequate basis for planning and implementation in university education or TEVET.
7. The conceptualization of quality in the NIF III was limited largely to quality inputs, not learning.
8. Some critical dimensions of equity were not addressed in the NIF III.
9. Progress on improving performance in efficiency indicators was slow.
10. The NIF III did not adequately address teacher supply, utilization and management.
11. The M&E arrangements for NIF III were complex and sometimes repetitious.
12. Under NIF III, policy measures to reduce the number of out-of-school children only had limited effect.
13. Under NIF III gender disparities reduced overall, but a few gaps continued, and even widened.
14. Under NIF III there has not been much attention for geographical and income disparities.
15. Even though NIF III addressed the needs of children with special education needs, the implementation of CSEN activities received limited attention and resources.

Source: MoGE

2.5 CHALLENGES IN DEVELOPING THE ESSP

One of the challenges in developing the ESSP was that while 7NDP provides for an integrated approach and a sector-wide analysis and plan, operationalization and implementation of the plan is executed through two separate ministries with specific mandates, budgets, governance and institutional arrangements, and responding to somewhat different stakeholders.

Every effort is made to ensure optimal alignment of the operational plans of each ministry (MoGE and MoHE) to the common objectives and goals. However, the true test of alignment will be in the annual work plans and budgets that are prepared by each ministry drawing on a common plan, and as performance is assessed against the 7NDP key performance indicators (KPIs).

There are considerable challenges presented by the limitations of the available data. These are reviewed in more detail in the ESA. To the extent possible these were addressed during the development of the plan, which includes a commitment by both ministries to strengthen their databases, and to use research studies to fill in data and information gaps.

A further significant challenge in developing the plan was the necessity to develop the ESSP in parallel with the 7NDP. When there were delays in finalizing aspects and elements of the national development plan this often led to delays in ESSP development. Nonetheless, given that the ESSP serves as the education sector's operational framework for the 7NDP, preparation had to be coordinated with 7NDP development.

In order to address the many issues facing the education sector, and recognizing the complexity of these issues, this ESSP includes a significant number of upstream activities aimed at the elaboration of issue-specific strategies, mechanisms and frameworks. About 30 per cent of the 100 activities related to the MoGE in the IP are of this nature. Examples include:

- The development of a framework for fast-tracking education and flexible curriculum for over-aged school children;
- Development of a framework for teacher management;
- Development of a framework for supervision and support at points of education delivery;
- Development of a mechanism to expand the supply of ECE teachers;
- Development of mechanisms to increase retention of girls in rural areas;
- Elaboration of a strategy to procure, distribute and ensure utilization of TLM;
- Development of a strategy to reduce imbalances in the allocation of teachers by gender, rural/urban; and
- Development of a clear strategy for financing universal ECE.

These activities will take place during 2018–19 and are associated with output indicators.

2.6 RATIONALE FOR THE ESSP

Development of the ESSP has been necessitated by a number of issues that have impacted on the operations of the two ministries. These are:

- i.) In 2015, MESVTEE undertook an institutional assessment to assess its performance and also inform the development of the new strategic plan for the period 2017–2020. The institutional assessment brought to the fore a number of important issues that needed to be attended to in the two new ministries' Strategic Plans;
- ii.) The need to realign the ministries' programmes and plans to the 7NDP; and
- iii.) Prioritization of the Education, Science and Skills Development sector as one of the key potential sectors for job creation and economic development in the country (as envisaged within the 7NDP).

2.7 THE CONCEPTUAL FRAMEWORK AND STRATEGIC PRIORITY AREAS OF FOCUS OF THE ESSP

The principal conceptual framework underlying the ESSP is that of the 7NDP, which emphasizes the integration of the education sector into the wider national drive to achieve Vision 2030.

Figure 2.1 illustrates how the 7NDP Strategic Objectives (in grey) operationalize the main pillars of Vision 2030.

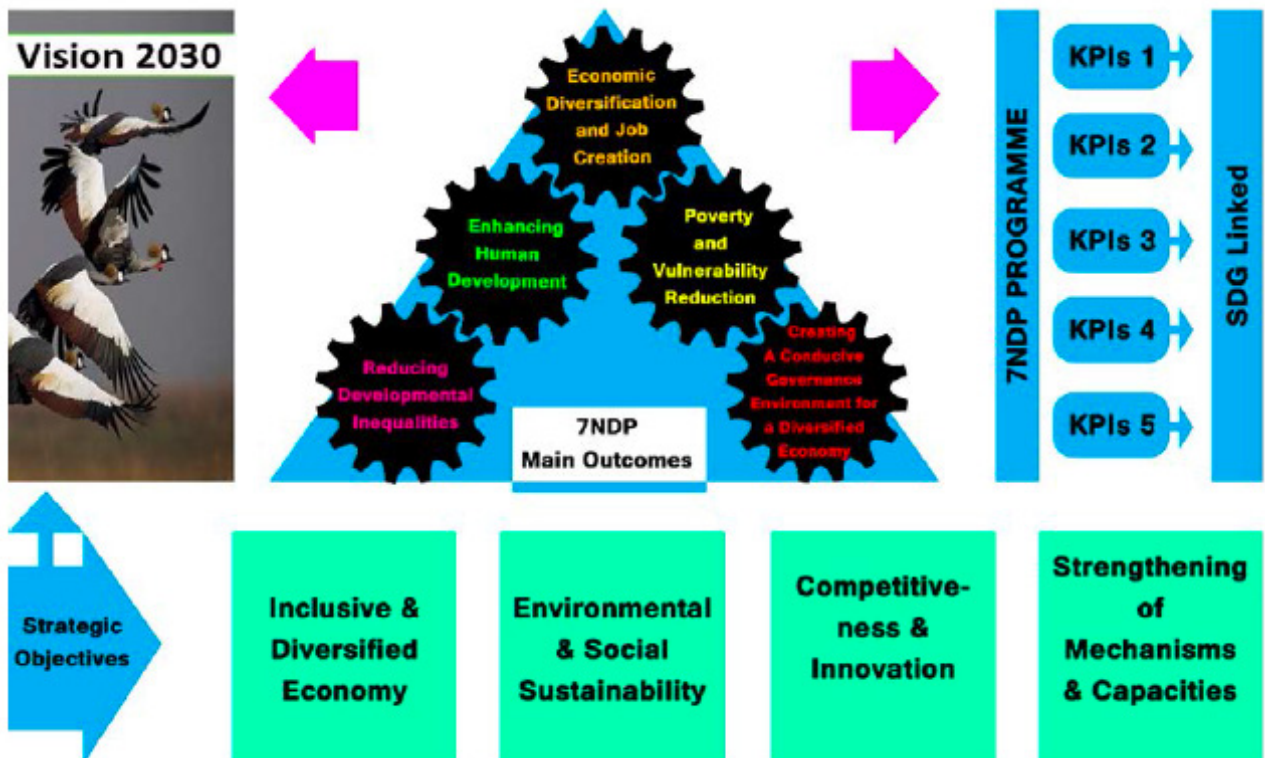
Figure 2.1. Vision 2030 and 7NDP main outcomes



Source: MoNDP – 7NDP

The 7NDP also provides another visual representation that, more specifically, identifies the linkages between the education sector and the achievement of the national goals envisaged in the 7NDP. This is represented in Figure 2.2, which depicts the overall 7NDP Conceptual Framework.

Figure 2.2 7NDP Conceptual Framework



Source: MoNDP – 7NDP

To operationalize this integrated approach, the 7NDP identified five strategies for the education sector, each with four to six individual programmes that will be led by the education sector, summarized in Box 2.2.

Box 2.2. 7NDP strategies and programmes for education sector

Strategy 1: Enhance access to quality, equitable and inclusive education:

- a. Infrastructure development;
- b. Teacher training, recruitment and deployment improvement;
- c. Equity and inclusive education enhancement;
- d. Youth and adult literacy expansion and improvement; and
- e. Policy coordination, planning and information management improvement.

Strategy 2: Enhance access to skills training:

- a. Centres of excellence establishment;
- b. Trades training institutions operationalization;
- c. Training institutions rehabilitation and construction;
- d. Alternative training mode promotion;
- e. CPD; and
- f. Inclusive vocational training promotion.

Strategy 3: Enhance private sector participation:

- a. Private sector education participation promotion;
- b. Private sector skills development participation promotion.
- c. Private sector youth and adult education participation promotion; and
- d. Public-private partnership (PPP) Skills Development Fund implementation.

Strategy 4: Continuous review of curriculum

- a. Curriculum and materials development;
- b. Pre-service and in-service teacher training provision;
- c. Curriculum assessment and evaluation enhancement;
- d. Standards monitoring enhancement;
- e. Curriculum framework standardisation; and
- f. Training equipment provision.

Strategy 5: Enhance role of science, technology and innovation

- a) Science and technology human capital development;
- b) Science and technology infrastructure development;
- c) Science, technology and innovation financing;
- d) STI quality assurance enhancement; and
- e) STI coordination enhancement.

Source: MoNDP – 7NDP

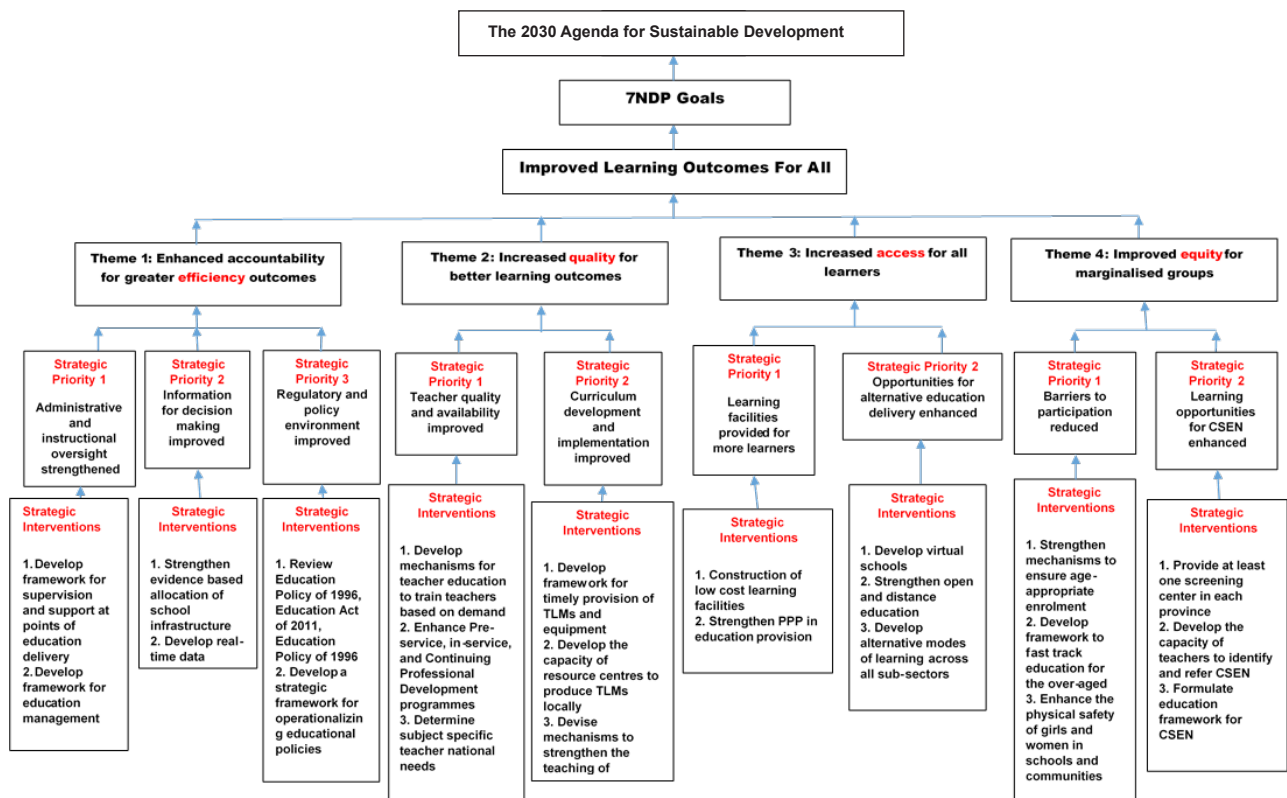
The 7NDP also recognizes that the education sector's contribution is central to enhancing human development, and contributes significantly to the other four main outcomes of the 7NDP: (i) reducing developmental inequalities, (ii) economic diversification and job creation, (iii) poverty and vulnerability reduction, and (iv) creating a conducive governance environment for a diversified economy. However, the ESSP seeks to align itself most closely to the five strategies that are most directly linked to educational performance and achievement.

It is in the nature of integrated national development programmes that they highlight the key strategic contributions to the national development goals for each sector, but they do not include all the

programme commitments and responsibilities of each sector. For this reason, the 7NDP provides for each sector to develop a sector strategic plan that can drive sector planning, budgeting and implementation on a year-by-year basis within the overall framework of the 7NDP.

To ensure that the plan addresses all the programme commitments and responsibilities of the education sector, the ESSP incorporates a set of thematic areas that will provide a framework for implementation of both the 7NDP programme commitments and the sectoral responsibilities and commitments in an integrated way. The ESSP results framework is summarized in Figure 2.2, demonstrating how it contributes to the 7NDP and the global education represented by SDG4.

Figure 2.2. ESSP Results Framework



The ESSP Results Framework is based on the initiatives described in Annex 2, which outlines how the planned programmes align with the 7NDP's vision. Accordingly:

- Each of the 7NDP Programmes is reflected in at least one or, often, more elements of the ESSP Framework;
- Each of the ESSP intervention areas and strategies is located in at least one of the 7NDP programmes;
- Some of the 7NDP columns in the matrix (Annex 2) apply to specific interventions in a specific strategy implemented by MoGE and/or MoHE, and some apply to several sub-sectors. In all cases, the issues are addressed in the relevant forms in the objectives and strategies, and implementation plan (IP) of each sub-sector and ministry;
- While some areas of intervention and strategies could be seen as contributing to more than one thematic area (e.g., they could be argued to advance both efficiency and equity), they are framed in the category where their impact is considered most significant; and
- This matrix in Annex 2 linking links the ESSP key strategies and interventions and to the 7NDP is invoked throughout the text of this document, to ensure that the ESSP remains true to the main strategies and programmes of the 7NDP.

THE EDUCATION SECTOR: CONTEXT AND ANALYSIS 3



3. THE EDUCATION SECTOR: CONTEXT AND ANALYSIS

3.1 THE SOCIAL CONTEXT

Human Development Indicators

Table 3.1 shows that the mean years of schooling and the human development index values for Zambia have improved steadily since 1980, and that after an initial decline, life expectancy at birth was about 20 per cent higher in 2014 than in 1980.

Table 3.1. Trends in human development indicators 1980–20

Year	Life expectancy at birth	Mean years of schooling	HDI value
1980	51.5	3.4	0.418
1985	48.7	4.0	0.409
1990	44.3	4.7	0.403
1995	42.1	6.0	0.412
2000	43.5	5.9	0.433
2005	49.5	6.3	0.490
2010	56.4	6.6	0.555
2011	57.5	6.6	0.565
2012	58.4	6.6	0.576
2013	59.3	6.6	0.580
2014	60.1	6.6	0.586

Source: UNDP, Human Development report 2015, Zambia briefing note

Population trends

At independence Zambia's population was about 3.5 million; the current population is about 16.4 million.³ Population growth projections are around 2.8 per cent per annum. Census data estimate the child population (18 and younger) at 52.5 per cent of the overall country population. Life expectancy is 58.2 years for men and 62.0 years for women. About 40 per cent of the population lives in the urban areas. Of particular relevance to the provision of services, including education, is the density of population. Zambia is a very sparsely populated country at 21.5 people per square kilometre, ranking 201 out of 241 countries surveyed.⁴ The population growth rate also has a strong effect on the demand for services and particularly education.

The fertility rate is a major factor affecting population growth. The total fertility rate in Zambia was 5.0 in 2015.⁵ This was down from 5.9 in 2010. However, Zambia still ranks among the top 12 countries in the world with respect to fertility rates. The impact of education on fertility rates in Zambia appears strong: according to the 2010 census, the rates were 6.8 per cent for women (aged 15–49) with no education, 7.1 per cent for those with primary education, 4.6 per cent for those with secondary education and 2.8 per cent for those with tertiary education.

Poverty

According to the 2015 Living Conditions Monitoring Survey (LCMS), around 54.4 per cent of the population in Zambia could be considered poor, subdivided into extremely poor (40.8 per cent) and moderately poor (13.6 per cent). When compared with the 1996 LCMS, poverty has, however, declined from 69 per cent in 1996 and 64 per cent in 2006. These improvements have mainly benefited urban areas, since only a quarter of urban dwellers are poor, as compared to three quarters of rural

³ According to the population projections from the 2010 census conducted by the Central Statistics Office (CSO) for 2017

⁴ Population Density, World Bank Group data

⁵ World Bank data

Zambians living in poverty. In absolute numbers, this means that 8.5 million people are living in poverty, with 6.4 million of those living in extreme poverty with insufficient resources to meet their daily minimum food requirements. There is wide regional variation in poverty rates, varying from over 80 per cent in three provinces (Western, Luapula and Northern) to 31 per cent in Copperbelt and 20 per cent in Lusaka. Poverty is greatest in rural areas, where it has a strong impact on all aspects of education, including access, quality and attainment.

In addition to the high levels of poverty, the distribution of wealth in Zambia is highly inequitable. According to the World Bank, with a Gini coefficient of 57.1, Zambia is ranked fifth in the world in terms of income inequality.

Health and nutrition

Malaria is the most commonly reported illness in both rural (43.7 per cent of reported illnesses) and urban (34.9 per cent of reported illnesses) settings.

HIV/AIDS. Zambia has one of the highest HIV/AIDS prevalence rates in the world and is among the countries most affected by HIV/AIDS globally. The HIV/AIDS epidemic in Zambia is a generalized and mature epidemic within the population. Across the country, HIV/AIDS prevalence is higher for females than males, with urban areas reporting higher rates for both sexes. This epidemic threatens to undermine the delivery and quality of education services in the country given its impact on teachers and on children who become orphans.

The devastating impact of the HIV/AIDS epidemic in Zambia does, however, appear to be declining. According to the 2013/14 Demographic and Health Survey (DHS), HIV/AIDS prevalence declined from 15.6 per cent between 2001 and 2010 to 13.3 per cent in 2013/14. In addition to this decline, the Zambian response to HIV/AIDS has been aggressive and persistent and knowledge of HIV/AIDS in Zambia is universal: almost all women aged 15–49 and men aged 15–59 have heard of HIV/AIDS and 42 per cent of women and 49 per cent of men have comprehensive knowledge.

Malnutrition and hunger. Levels of malnutrition among young children in Zambia are high. Forty per cent of children under age five are stunted, 6 per cent are wasted⁶ and 15 per cent are underweight according to the most recent Demographic and Health Survey. There is improvement: stunting declined from 46 per cent in 1992 to 40 per cent in 2013–14, which is, however, still much too high. The survey also found that stunting ranges from a low of 18 per cent when mothers have at least a secondary education to a high of 45 per cent when mothers have no education. There is now considerable international evidence that “large developmental deficits can arise if children do not have adequate access to nutrition, health care, cognitive stimulation and socio-emotional support during their earliest years”.⁷

Languages in Zambia

Seven languages have an official status in Zambia: Bemba, Nyanja, Lozi, Tonga, Kaonde, Luvale and Lunda. In practice, though, as many as 72 different languages are spoken. The first four languages are spoken most commonly, while the last three are spoken mainly in North-Western Province. A major change in the curriculum has been the policy to provide instruction in the language of play from ECE through to Grade 4 in primary school and in English from Grade 5 onwards.

3.2 MACRO-ECONOMIC AND PUBLIC FINANCE CONTEXT

Trends in GDP and GDP per capita

The current GDP for Zambia⁸ is slightly above USD 28 billion and GDP per capita is slightly above USD 1,860. From 2011 to 2013, Zambia continued to achieve real annual GDP growth rates of about

⁶ Children are considered stunted when their height for age score is 2 standard deviations below the WHO norm, while they are considered wasted when the measurement of weight for height is 2 SD below the norm.

⁷ Bruns, Barbara; Luque, Javier; Bruns, Barbara; Luque, Javier. 2014. *Great teachers: how to raise student learning in Latin America and the Caribbean (English)*. Washington, DC: World Bank Group.

⁸ *Zambian Economic Indicators* (2017).

6.3 per cent, comparable to the growth rates during 2006–2010. This was followed by a decline in the next three years, as shown in Table 3.2.

Table 3.2. Real GDP growth from 2011 to 2015 and estimated for 2016

	2011	2012	2013	2014	2015	2016
Sub-Saharan Africa	5.0%	4.3%	5.3%	5.1%	3.4%	1.4%
Zambia	5.6%	7.6%	5.1%	4.7%	2.9%	3.8%
Zambia per capita	2.5%	4.4%	1.9%	1.6%	-0.1%	0.2%

Source: IMF Regional Economic Outlook May 2017 and World Bank for per capita GDP

As Table 3.2 shows, despite the slowdown in GDP growth rate, Zambia's economy is performing relatively well in the overall sub-Saharan African context. However, high population growth – estimated at 2.8 per cent – is affecting GDP per capita, where the growth rates are well below those of overall GDP.

Zambia's economic performance has largely been driven by growth in construction, transport, communications, the public sector, trading and mining. Mining remains the driver of investment in other sectors, especially construction, transport and energy. Copper is the country's mainstay, contributing about 70 per cent to export earnings. However, over the last few years the economy has become more diversified and non-traditional exports have grown substantially. Economic performance in the medium term is expected to remain strong.

The Zambian economy has, to a large extent, been relatively resilient to the global crises in recent years, and its performance allowed the country to move from its status as a low-income country to a prospering lower middle-income country. Agriculture remains the most important sector from a socio-economic point of view, providing employment opportunities for 60 per cent of the country's informally employed population of 4.9 million and 8 per cent of the 625,000 formally employed.⁹ Increasing the level of youth employment remains one of the biggest challenges.

Public resources

Over the past three years, government revenues have averaged 18 per cent of GDP, a little below the average for SSA.¹⁰ The 2014 Global Monitoring Report on Education recommends that governments should secure at least 20 per cent from taxes in order to ensure sufficient support for education.

Resources from official development assistance (ODA) are the main source of external resources. ODA can include loans or grants, in the form of global budget support (when the funds offered are completely fungible with national resources), sector budget support (to assist with the development of a particular sector, either through recurrent or capital expenditure), or project funds. In Zambia, this kind of support has been shrinking especially since Zambia was reclassified as a lower middle-income economy in 2010 by the World Bank. This had implications for grant or borrowing conditions.

Table 3.3. Financing trends of cooperating partners (CPs) (million USD)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
CP (ODA) financing	58	84	67	102	33	45	49	12	37	54	57
GRZ financing	361	378	566	462	574	679	826	953	1,361	9,446	8,105
Total education financing	419	462	633	564	607	724	875	965	1398	9.5	8,162
CP financing (%)	16	22	12	22	6	7	6	1	3	6	7

Source: Different MoGE Annual Reports (2006–2016)

⁹ Rasmussen et al. 2014.

¹⁰ IMF 2016

Table 3.3 shows (i) that the amount of support from CPs declined from USD 102 million in 2009 to USD 12 million in 2013 and then increased to USD 57 million in 2016, and (ii) that the relative importance of this financing has declined to between 1 per cent and 7 per cent of total education financing since 2013. Variations in this type of finance can be attributed to the withdrawal of some bilateral donors, and the entry (or increased commitment) of others over time.

Alignment with the macro-economic and public finance context for the ESSP period

Zambia's social and economic prospects are formulated in the 7NDP. The 2017–2021 macro-economic framework included in the 7NDP is guided by a paradigm shift from a sectoral to an integrated (multisectoral) development approach in which education plays a pivotal role. The new approach takes into account Zambia's comparative advantage in the region and aims to achieve an inclusive, diversified and sustainable economy. The ESSP is in alignment with this broader macro-economic framework.

Strategies

The level of public resources available depends on GDP growth. Table 3.4 shows the macro-economic projections for the period 2017–2021 as per the 7NDP. For 2017 the GDP growth is projected to be at 3.9 per cent, suggesting a possible modest increase in education spending. A slight increase in expenditures is expected in 2018 as the GDP growth is projected to improve to 4.6 per cent. The projected 2021 GDP growth is up to 5.5 per cent and this could result in improved public expenditures on education.

Table 3.4. 2017–2021 macro-economic projections

Baseline	Projections					
	2011–2016	2017	2018	2019	2020	2021
Real GDP growth	5.0	3.9	4.6	5.2	5.4	5.5
GDP at constant prices (ZMW, million)	122,662	134,095	140,255	147,525	155,537	164,038
Nominal GDP (ZMW, million)	181,276	240,123	271,728	309,659	354,571	406,072
CPI inflation (end of period)	21.1	7.0	7.0	7.0	7.0	7.0
CPI inflation (annual average)	11.0	7.0	7.0	7.0	7.0	7.0
Domestic borrowing (% of GDP)	2.3	< 2	< 2	< 2	< 2	< 2
Domestic revenue to GDP ratio (%)	17.5	> 18	> 18	> 18	> 18	> 18
Overall fiscal deficit, incl. grants (% GDP)	(5.3)	< (3)	> 3	> 3	> 3	> 3
Gross international reserves (months of current cover)	> 3	1.9	1.7	> 2	> 3	> 4
Share of non-mining to GDP (%)	79.8	> 80	> 80	> 80	> 80	> 80
Current account balance, including grants (% GDP)	2	(3.8)	< (2.4)	< (2.4)	< (2.4)	< (2.4)
Formal employment (% of total employment)	16.1	18.3	19.5	21.8	23.5	25.0
Working poverty rate (%)	37.8	35.9	35.0	34.0	33.0	32.0
Youth unemployment rate (%)	14.9	13.9	12.8	11.7	10.6	10.0

Source: 7NDP

3.3 PUBLIC EXPENDITURES ON EDUCATION

Education's share in GRZ budget

GRZ spending on education has been increasing in absolute terms since 2012. Education takes the largest single share of GRZ budget. Education's share of the total government budget had been increasing until 2015 and has been declining since. GRZ projections for 2018 to 2020 indicate that the average share of education in the budget will be 17.2 per cent.

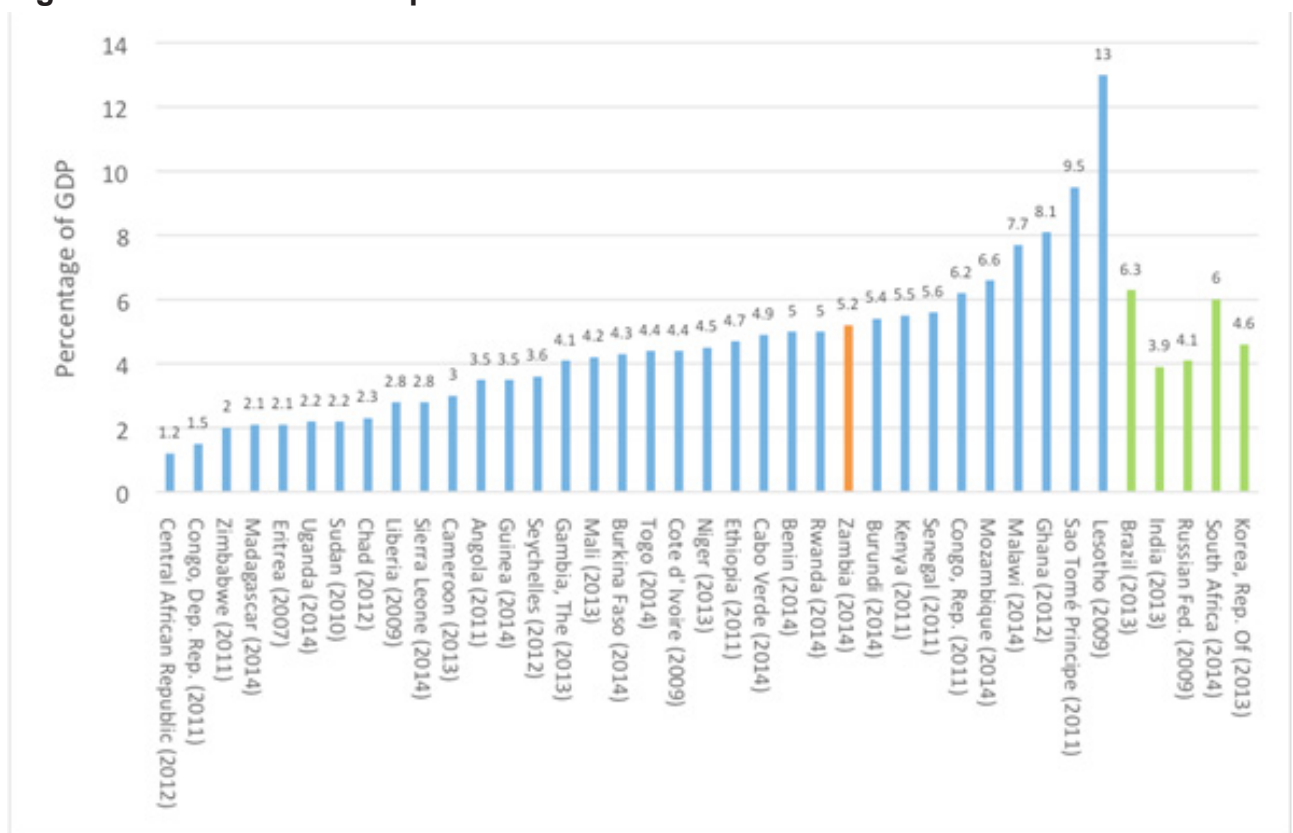
Table 3.5. Share of education in GRZ budgets: 2012–2017 (ZMW million)

	2012	2013	2014	2015	2016	2017
National Budget	26,179	33,790	42,682	46,667	53,136	64,510
Education Sector Budget	4,501	5,209	8,599	9,433	9,143	10,642
Education Budget as % of National Budget	17.2	15.4	20.1	20.2	17.2	16.5

Source: Estimates of Revenue and Expenditure for 2015, 16 and 17 and PER for earlier calculations.

International comparisons of education expenditure

Figure 3.1 shows government expenditure on education as a percentage of GDP for a number of African countries and other economies. Spending 5.2 per cent of its GDP on the education sector in 2014, Zambia is in the upper ranks of African countries in terms of the proportion of its GDP going to education.

Figure 3.1. Government expenditure as a % of GDP

Source: World Bank Education Statistics (EdStats), most recent years

Allocation of GRZ resources

Education garners the largest part of the total GRZ budget, accounting for 16.1 per cent of the overall budget. However, it is important to note that debt service (external and domestic debt payments) amounts to 19.9 per cent of the budget. This reduces the amount of public resources available for domestic policy action.

3.4 GENERAL EDUCATION EXPENDITURE STRUCTURE AND BUDGET EXECUTION

Expenditure on education can be broken down into four items: (i) staff and teacher salaries (PE); (ii) school grants for ECE, free primary education and secondary schools; (iii) teaching and learning materials; and (iv) infrastructure development, mainly for the construction of schools. Personal emoluments (salaries of teachers and staff) account for 89 per cent; infrastructure (construction and upgrading of secondary schools) amounts to 7.5 per cent; the remaining 3.5 per cent is for

everything else, including grants and TLM. The share of government education expenditure on TEVET is extremely limited, accounting for less than 1 per cent of total education expenditures. Table 3.6 shows the breakdown of the education sector budget between 2006 and 2015.

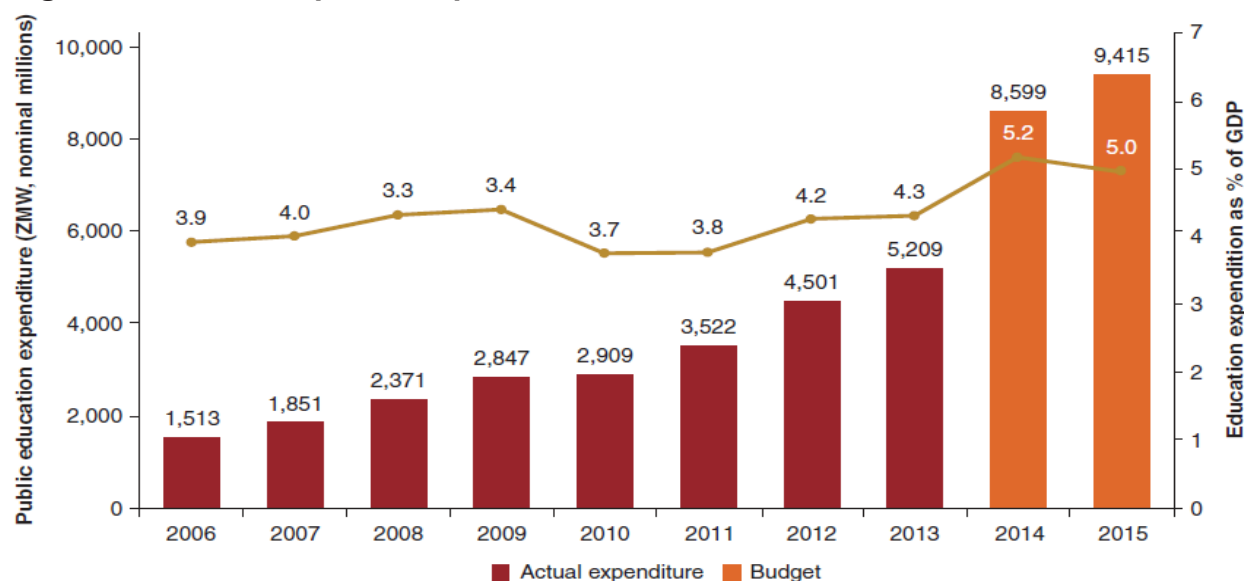
Table 3.6. Share (%) of government expenditure by category (2006–2015)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Budget	Budget
Basic	42.6	36.9	46.0	45.4	51.6	41.5	50.8	57.5	55.9	57.0
High school	10.2	7.9	9.4	10.9	12.2	9.7	11.4	12.7	12.8	22.4
Teacher education	3.1	2.4	2.3	2.0	2.2	1.9	2.0	2.0	2.2	0
TEVET	0.2	0.2	1.1	0.7	0.4	0.4	0.9	0.6	0.7	1.6
Higher Education	10.7	12.0	11.2	11.0	9.9	10.0	8.5	7.9	4.5	12.6
ST	0.2	0.2	0.4	0.3	0.2	0.3	0.9	0.7	0.7	0.8
Administration	33.0	40.4	29.6	29.8	23.5	36.1	25.4	18.6	23.0	5.6
Total	100	100	100	100	100	100	100	100	100	100

Source: Zambia Education PER (2016)

Although a considerable proportion of the authorized budget is released, usually in excess of 97 per cent, a very large part of this is for personal emoluments (PE) budget. When the infrastructure component is taken out of the non-PE, not all of the meagre remaining proportion is released, and this exerts significant stress on the available resources to manage the sector. Primary education expenditure, which historically accounts for about half of public education expenditure, has risen gradually in recent years. The public education expenditure trend shows that expenditures on primary education increased steadily in the years from 2006 to 2015. The overall trend for education expenditure is shown in Figure 3.2.

Figure 3.2. Trend of public expenditure 2006–2015



Source: Zambia Education PER (2015)

Current unit costs for primary and secondary education

Table 3.7 shows the overall expenditure on primary and secondary education and divides this by the number of primary and secondary students to estimate the unit costs per pupil. Given the higher salaries and lower staff ratios in secondary schools as well as the costs of supplies for laboratories, unit costs for each secondary student are between 17 per cent and 30 per cent higher than costs for primary school pupils.

Table 3.7. Unit costs for primary pupils and secondary students 2015 and 2016

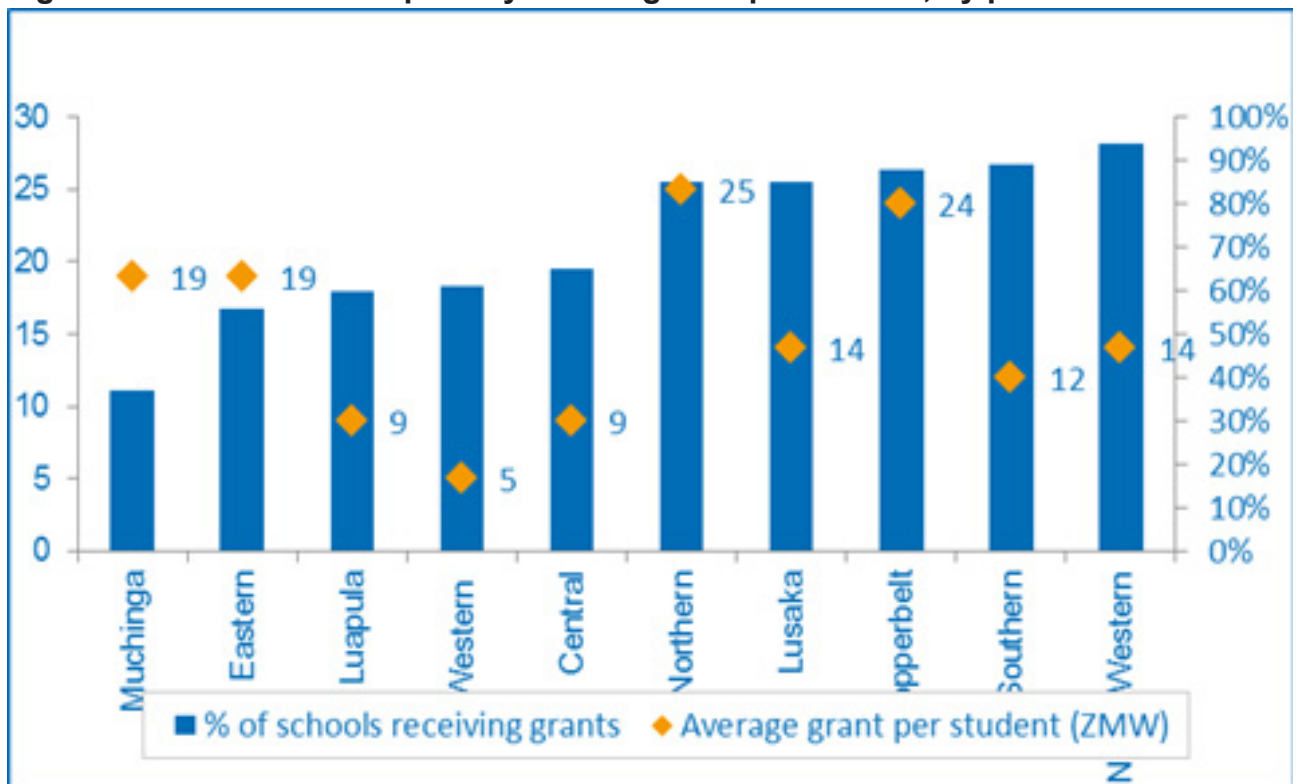
	Enrolment 2015	Expenditure 2015 in ZMW	Unit costs	Enrolment 2016	Expenditure 2016	Unit cost 2016 in ZMW
Primary	3,215,723	3,634,525,551	1,130	3,203,220	5,429,319,841	1,695
Secondary	802,341	1,177,317,848	1,468	822,160	1,629,238,511	1,982

Sources: ESB for enrolment and Estimates of revenue and expenditures 2017 and 2018 for expenditures. Note that 2018 Estimates are used for 2016 expenditures and 2017 for 2015 expenditures.

School costs

The financing of operating costs at school level continues to present a problem. While the budget execution of the PE component has been close to 100 per cent, the execution of school grants through the District Education Board Secretary (DEBS) has varied by province. The Public Expenditure Review (2015) concludes that in 2013, 28 per cent of schools did not receive a school grant. The other 72 per cent of schools received a grant of, on average, ZMW15 per student. This average amount, however, does not account for the differences in the amount of school grants received per province, which varied between ZMW19 and 25 per student.

Figure 3.3. Distribution of primary school grants per student, by province



Source: Education PER, 2015

The (pro-poor) allocation formula for grants has deficiencies, in that poor provinces do not necessarily receive a higher share of the budget. To address the challenges of this allocation formula, the ministry aims to re-introduce pro-poor criteria of allocating resources equitably to provinces from 2018



onwards. Among the measures to be undertaken are reviewing the pro-poor allocation criteria, and ensuring adherence to the attributes of the criteria. However, school grants are in general insufficient to fund the operation of schools. As a result, schools continue to collect various fees, even though primary education is supposed to be free for all pupils.

In order to disburse resources to the schools more efficiently, the MoGE is currently developing a pilot to transfer school grants directly, instead of via the DEBS office. This pilot will be combined with capacity development in financial management at school level.

Infrastructure spending

In addition to the underfunding of school grants, funding budgeted for infrastructure has not been released in full. Table 3.8 highlights the budgets and released amounts for infrastructure from 2015 to 2017. Reasons for not releasing the financial resources for infrastructure range from resources being inadequately mobilized by government to prioritizing outstanding elder infrastructure projects.

Table 3.8. Amounts budgeted and released for MoGE infrastructure 2015–2017 (ZMW millions)

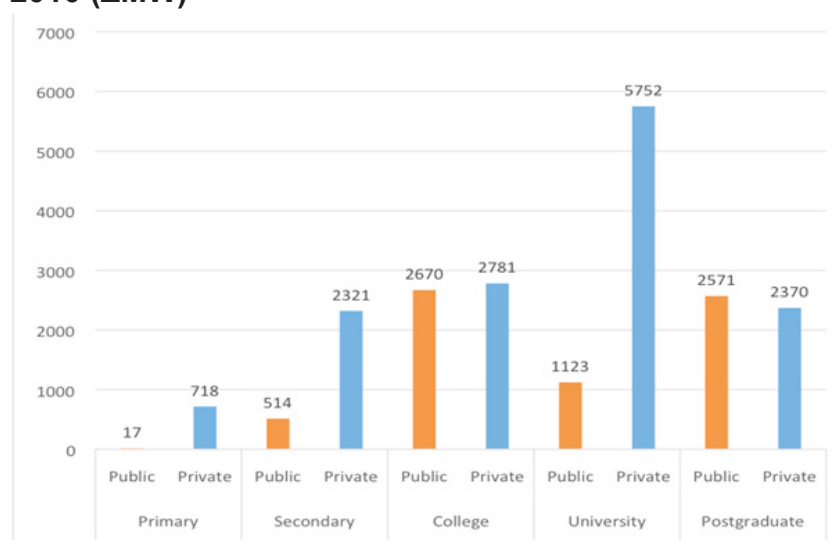
	2015		2016		2017	
	Budget	Released	Budget	Released	Budget	Released
ECE	42	0	34	33	30	0
Primary	4,846	0	101	0	90	0
Secondary	814	245	579	316	518	267
Total MoGE	5,702	245	714	349	638	267

Sources: 2017 and 2018 Estimates of revenue and expenditure

Household expenditures on education

The universal primary education policy resulted in primary education being opened to all, including children from poorer families. Yet there are still costs involved for parents to send their children to school – school uniforms for example. Households spend on average 6.3 per cent of their annual incomes on education and urban households spend more than rural households. Average household expenditure on education per year is ZMW98.¹¹ Figure 3.4 shows the annual expenditure per child at primary level.

Figure 3.4. Annual household expenditure on education per child by educational level, 2010 (ZMW)



Source: World Bank staff calculations using LCMS 2010

¹¹ 2015 LCMS; 6.3% of ZMW1,558.

Fifty-five per cent of primary schools still charge fees, whereas only 34 per cent of pupils actually pay them.¹² In addition to these direct costs of education, opportunity costs from withdrawn child labour, household chores, etc., should also be accounted for. Such costs often prevent children from poorer households from accessing education.¹³ Demographic Health Survey 2013/2014 data show that children of primary age from the poorest households in rural areas are more likely to be out of school than other children. Around 70.2 per cent of girls and 68.9 per cent of boys from the lowest household income quintile attended primary school during the year of the survey. In the richest quintile, the survey found 85.4 per cent of girls and 86.7 per cent of boys attending.

Secondary schools rely heavily on various fees which, on average, amount to ZMW250 per student per term.¹⁴ About 10 per cent of secondary school expenditures are derived from public school grants, while 90 per cent come from school fees. The government contribution of 10 per cent (ZMW25) indicates that the policy goal of universal secondary education, as expressed in the NIF III, is still far from being realized.

3.5 SWOT ANALYSIS OF THE EDUCATION SECTOR

This environmental analysis draws on the feedback obtained from multiple stakeholder consultations, analyses of issues arising from the 7NDP environmental analysis, and discussions among planners from various ministries. The main techniques used were Strengths, Weakness, Opportunities and Threats (SWOT) analysis for the education sector.

Strengths

- A clear mandate as government institutions through the establishment of the government ministries and departments;
- Existence of formal organizational structure and management systems;
- Clear education policy guided by the principles of liberalization, decentralization, equality, equity, partnership and accountability;
- Clear job descriptions and accountabilities for staff;
- A base of an available core of qualified and experienced staff;
- Existence of strategic plans at every provincial education office;
- Existence of clear dialogue structures for sharing and disseminating information;
- Commitment of government to financing the sector;
- Strong partnerships with cooperating partners (CPs) and civil society;
- Progress made on updating education sector legislation and policy;
- Increased stakeholder participation in the provision of education;
- Long history of support from chiefs in the provision of education.

Weaknesses

- Organizational structure does not adequately address the diverse sub-sectors and rapid expansion of the educational system;
- Inadequate synergy among ministries, departments and units in the sector;
- Lack of induction strategy for new employees and those assigned different portfolios;

¹² PETS 2015.

¹³ Demographic Health Survey 2013/2014.

¹⁴ PETS 2014.



- Inadequate thresholds and lack of transparency in the procurement process;
- Inadequate competences and skills among some staff members;
- Poor work culture among staff at all levels, including teachers;
- Disproportionate allocation to personal emoluments (PE);
- Policy inconsistencies and frequent change of personnel in strategic positions;
- Inability to meet the education demands of continued population growth rate and changing demographic patterns;
- High dependency ratio on government funding;
- Limited availability of teaching and learning materials.

Opportunities

- Stable political and security environment;
- Raised profile for human development articulated in the 7NDP;
- Strong engagement in regional and global bodies;
- Strong parental and community participation;
- Robust public service incentives and compensation that guarantee regular PE;
- Financially backed opportunities for increasing staffing number levels in education;
- Decentralization of the education delivery system could enhance accountability;
- Pool of qualified and experienced staff increases national capacity to deliver quality services;
- Enabling environment created by strong frameworks that support increased investment;
- The integrated approach of the 7NDP encourages establishment of stronger linkages and synergies across sectors and with both traditional and non-traditional partners;
- Clear government priority on education as reflected in the Constitution and budget allocation;
- Technical and financial support from CPs;
- Global technological advancement;
- Population growth that provides clientele for education.

Threats

- Inadequate and irregular funding of non-PE items negatively impacts prioritization of investments;
- Disproportionate allocation of resources to PE;
- Increased private sector provision of education services requires strong monitoring to ensure conformity to required standards;
- Continued need for expanded access in line with demographic factors is not matched with required funding to maintain or increase quality;
- Policy inconsistencies;

- Decline in CPs' funding to the sector;
- Adverse political interference in the sector;
- Growing inequalities amidst increasing GDP growth rate;
- Lack of appreciation of the benefits of education in some sectors of the community;
- Low literacy in ICT among citizens.

3.6 THE EDUCATION POLICY FRAMEWORK

The policy framework for the education sector has its foundation in the following documents:

- Educating our Future Policy of 1996;
- The TEVET Policy of 1998 (skills development); and
- The Science and Technology Policy of 1996.

All three policies were pertinent; they are currently being updated to reflect new developments in the sector.

A policy review conducted by UNESCO in 2015 found that in terms of system-wide policy and planning, Zambia has in place credible policy and institutional provisions with regard to educational planning, governance and management. Challenges arise from the implementation of education policies and programmes, which is often hampered by ineffective accountability mechanisms, poor regulatory frameworks, weak enforcement of laws and regulations, and, to some extent, resourcing issues, such as the shortage of skilled staff.

In this context, the education sector in Zambia could benefit from:

- Review of the relevant education policies and the relevant legal and regulatory frameworks;
- Establishment of a robust policy implementation;
- Establishment of a M&E framework for improved accountability;
- Policy formulation grounded on research and empirical data, and matched with resources for implementation.

3.7 INSTITUTIONAL AND ORGANIZATIONAL STRUCTURE

Evolution of the structure of the education system

The structure of the education system has changed several times since Zambia's independence. After independence in 1964, Zambia adopted the 7-2-3-4 system, which entailed seven years of primary, two years of junior secondary, three years of senior secondary and at least four years of university education. In the early 1970s the system was changed to a 7-3-2-4 structure. In 1983, the government reverted to the 7-2-3-4 system which was, again, changed in 1996 to be replaced by the basic and high school concept as propagated by the education policy document *Educating Our Future*. This document stimulated the approach to provide first nine years of schooling in one institution and implied a 9-3-4 structure for the education sector. With the change of government in 2011, there has again been a policy shift from basic (Grades 1–9) and high school (Grades 10–12) back to primary (Grades 1–7) and secondary (Grades 8–12) school.

From independence onwards, education has been provided through primary and secondary schools. *Educating Our Future* in 1996 triggered the switch to a 4-9-3-4 structure, comprising four years of ECE, nine years of basic education, three years of high school education and four years of university. While this reflected a global trend towards the establishment of basic education, substantial challenges were confronted in making the shift to the new institutional structure.

Accordingly, with the change of government in 2011, there was a shift in institutional structure to a 4-7-5-4 (ECE-primary-secondary-university), reverting to a version of the original structure since Zambia's independence. Even though this shift was not fully accommodated in the NIF III, efforts were immediately initiated to revert to the primary/secondary system. In recent years progress has been made in shifting back to this structure, but the current system includes a substantial number of public, community and private institutions that have not been changed.

In spite of this shift, Zambia is still committed to the internationally accepted minimum of nine years of universal basic education and skills training for every learner. This was reaffirmed in 2015 through the Incheon Declaration. This declaration encourages states to ensure the provision of 12 years of free, publicly funded, equitable quality primary and secondary education, of which at least nine years are compulsory. This commitment to expanding free and accessible education is also promoted with the SDG4 for 2030. Due to the huge financial resources required for implementation, in Zambia the aspirations in the declaration are being implemented in a phased approach. Moreover, in its implementation of the universal education policy, the country has made several commitments. In the Education Act of 2011 the government committed to free education from Grades 1 to 7 and in the extended NIF III the ministry committed itself to provide free education for Grade 1 up to 12, as resources permit.

The major implication for this ESSP is that the drive to complete this restructuring of the system will continue to be a priority during the years of the plan.

Decentralized provision of education

Decentralization has been an ongoing commitment of the government for many years. The 7NDP prioritizes the acceleration of this process. The IP for the 2013 National Decentralization Policy 'Towards empowering the People' highlights the following implications in the education sector:

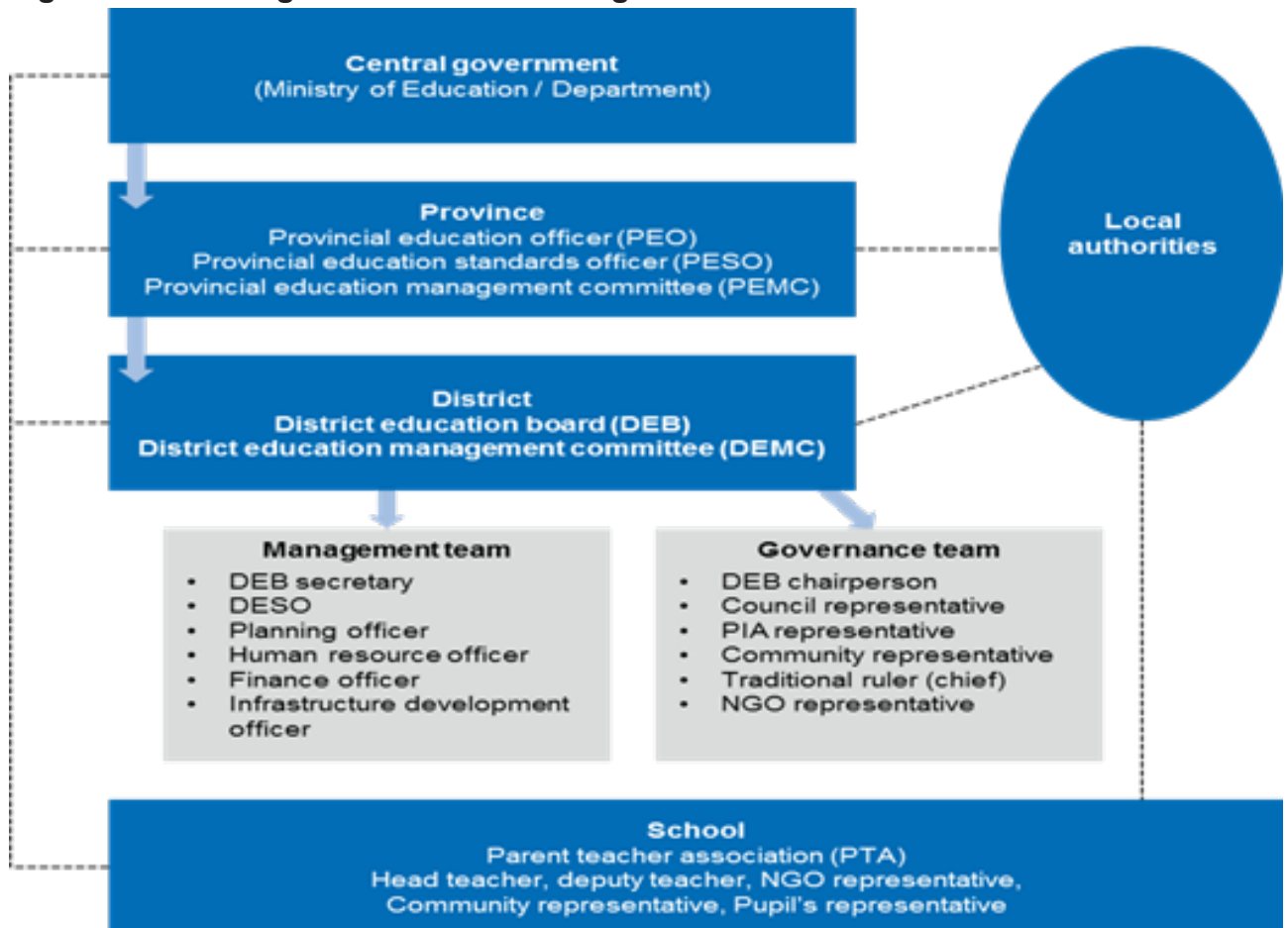
- Devolve ECE, primary education, and YALE to local authorities, while retaining responsibility for secondary and higher education. The formulation of national policy and legislation, as well as oversight and coordination of the operations of statutory bodies and institutions, including Education Boards and university management structures is also to be decentralized;
- Devolve key functions and powers to points of delivery, including fiscal decentralization, while providing guidance on such issues as teacher recruitment

Changing ministry structures

In 2011 a GRZ review of its structures and portfolios resulted in the merger of the MoE with the MoSTV into the MESVTEE. The key rationale for this merger was to have a single institution to efficiently and effectively handle education and training. Because of practical implications, e.g., emerging workloads and protests from key stakeholders, the GRZ decided in 2016 to split the Ministry into a MoGE and a MoHE. The MoGE is responsible for ECE, primary and secondary education as well as YALE. The MoHE in turn is responsible for university education, TEVET, and science, technology and innovation. Teacher education, both pre-service and in-service, is still the responsibility of the MoGE, even though teacher training institutions have been upgraded to universities.

Current governance structure of the education system

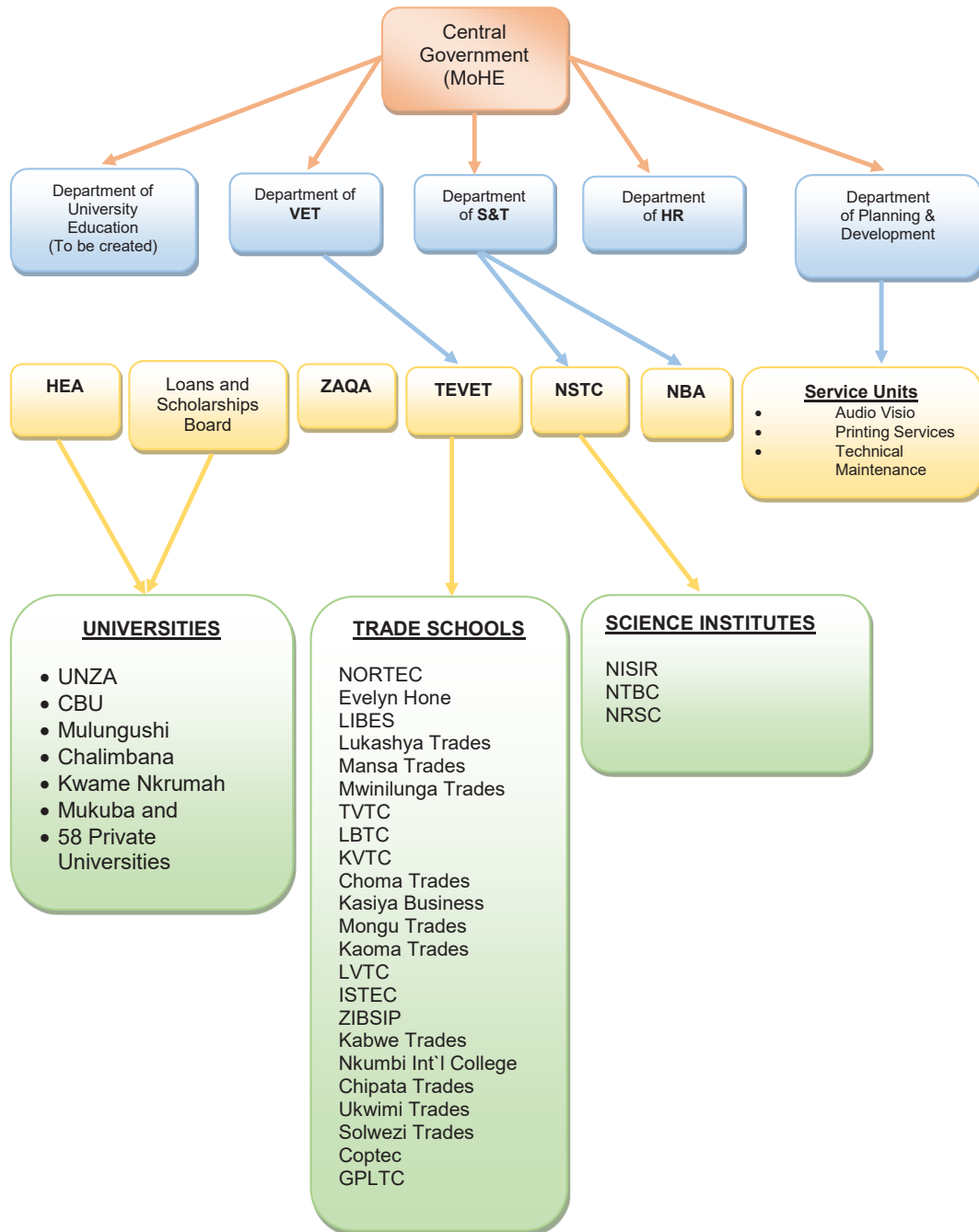
The MoGE and MoHE have different governance structures. The existing structures are likely to change as soon as the government reinforces its decentralization policy. Then the focus of the two ministries is likely to shift to policy formulation and resource mobilization. The structures of the two ministries are seen in Figure 3.5 and Figure 3.6.

Figure 3.5. MoGE governance and management structures

The directorates are supported by specialized agencies of auditing and procurement. In executing its mandate, the ministry is supported by five statutory bodies/institutions which are:

- Education Boards (including DEBs and institutional boards);
- Examination Council of Zambia (ECZ);
- Teaching Council of Zambia (TCZ);
- Zambia Educational Publishing House (ZEPH);
- Zambia National Commission for UNESCO.

Figure 3.6. Structure of higher education system



Given the high level of autonomy of higher education institutions, universities in particular, the MoHE is guided by the following principles to efficiently and effectively manage the higher education sector:

- Restructuring and strengthening the institutional and regulatory framework;
- Re-organizing financing to university education, TEVET and STI;
- Strengthening the policy and legal framework for university education, skills training and science and technology;
- Increasing access to quality and equitable university education and skills training;
- Re-branding of TEVET and skills training;
- Strengthening basic and applied research in higher learning and research institutions;
- Strengthening the commercialization and uptake of innovations and/or R&D results.

There was close communication and coordination between MoGE and MoHE in the preparation process of this ESSP and this will become more important during the implementation of the ESSP. This will be particularly crucial for areas such as skills development and teacher education where competences overlap.

During 2016, the MoGE and MoHE both participated in a process, led by the Cabinet Office, to revisit strategic implications of their current structures and functions articulated in an organizational strategic plan for each ministry.

For the MoGE, this resulted in a proposed redesign of the organizational structure to create better alignment with the programme structure required by output-based budgeting (OBB), which was introduced into the MoGE from 2015 on a pilot basis. The proposed changes included the creation of the two separate Directorates of Primary and Secondary Education. Most importantly, a single organizational unit was to become accountable for the implementation of the main programmes of the MoGE. Finally, the redesign included assessments of staff members and the introduction of institutional requirements, including recommendations for reassigning personnel, and strengthening some units.

3.8 STAKEHOLDER ANALYSIS

A wide range of stakeholders support the education sector in various ways. It is part of the government's strategy to partner with key stakeholders to increase access to quality education as well as to improve the quality of life for all Zambians. The GRZ has signed partnership arrangements or memorandums of understanding with a number of organizations working in education. This stakeholder involvement and partnership approach is a key element of the 7NDP. The main stakeholders in the sector are: pupils, teachers, education managers, parents/communities, teacher unions, civil society organizations (CSOs), including the Zambia National Education Coalition (ZANEC), faith-based organizations (FBOs), the private sector, cooperating partners and other government ministries whose mandates have a bearing on the delivery of quality education for all.

The Ministry of General Education has put in place mechanisms for stakeholder consultations and engagement at all levels, and these organs had input in the formulation process of the ESSP. Among the notable mechanisms are the following:

- a) **Policy and Implementation Technical Committee (PITC):** The PITC is constituted between MoGE, cooperating partners and CSOs in the education sector. It is the overall joint coordination body in the sector, which meets quarterly and provides a coordination mechanism for the following committees: Financial Technical Committee; Procurement Technical Committee; Monitoring and Evaluation Technical Committee. The PITC is an advisory body, which provides advice on government policies related to the education sector, and also on effective implementation of the activities as defined in the Education Plans and AWPBs. The PITC made submissions to the ESSP process and validated the final ESSP.
- b) **Monitoring and Evaluation Technical Committee:** The METC is an advisory body comprising MoGE, CSOs and NGOs, which makes recommendations to the PITC in the areas of monitoring, evaluation and research. The main objectives of the METC include: to review the implementation of programmes as contained in the education plans and annual work plans and budgets; to review performance indicators, planning and budgeting processes, mode of support and other areas of concern that impede implementation of education delivery.

Regularly scheduled meetings are held monthly with extraordinary meetings called as the need arises. The METC provides critical input especially in the Joint Annual Review (JAR), where all stakeholders attend to review the performance of the sector in the previous year.

- c) **The Procurement Technical Committee (PTC):** This committee, chaired by the Permanent Secretary, comprises the ministry staff, CSO, NGOs and two independent members. The committee gives guidance on procurement-related issues and provides the oversight role of ensuring adherence to regulations. The committee had an input in the ESSP on the procurement processes, procurement act and timeliness.

Other than the stated organs, provincial consultation meetings were undertaken involving lower-level stakeholders in the early developmental stages of ESSP formulation. A national consultation meeting was held at Mika Convention centre, where the provincial engagements were discussed. In addition, during the 2017 Joint Annual Review, a dedicated session was held for consultations on the ESSP.

The stakeholders for the higher education and skills sub-sector are: parents and students; governing boards (councils); academic staff; public and private institutions, civil society organizations, higher education regulators; employees, clientele; suppliers; communities; CPs and other government ministries.

The 7NDP requires that sector ministries collaborate with each other in delivering quality services. The Ministries of Finance, Health, Community Development and Social Services, Youth Sport and Child Development, and Local Government, as well as Chiefs and Traditional Affairs all contribute to the delivery of education.

The Zambian education sector will continue to benefit from, and further develop, stakeholder cooperation given that the GRZ is determined seek further collaboration to advance the sector. Increasing decentralization is expected to further develop local-level stakeholder collaboration.

3.9 STRATEGIC CONTEXT

A range of strategic interests come into play for the GRZ when advancing human development – a main 7NDP outcome.

The wider development context

Close collaboration is ongoing with stakeholders involved in health and nutrition, child safety and social welfare. In addition, the GRZ is working closely with those responsible for social and economic development, including employment and job creation. The strong focus of the 7NDP on diversification of the economy and strengthening agriculture and other key sectors, and the commitment to reducing poverty and vulnerability and inequities across the board, all have implications for the education sector, in terms of both the potential contribution of the sector to advancing these goals, and the impact that these issues have on the sector.

Strategic priorities of the ESSP will be implemented in a context of reasonable political stability following the recent election, and a pace of economic growth that, although slower than under the previous development plan, can be assumed to be reasonably positive over the period of the plan.

Ongoing reforms from 7NDP

The most significant element of the sector strategic context is the 7NDP. The 7NDP commits the government to accelerate progress on five broader public sector reforms that had been initialized under previous plans but which progressed only slowly. These are summarized in Box 3.1.

Box 3.1 Ongoing reforms incorporated into 7NDP

- **Decentralization** – whose objective is to devolve some central government functions to lower levels with matching resources;
- **Public Service Management Reforms** – aimed at strengthening the efficient operations of the public service for enhanced service delivery;
- **Private Sector Development Reforms** – intended to create an enabling environment for the private sector to efficiently and effectively participate in the socio-economic development of the country;
- **Public Finance Management Reforms** – aimed at improving transparency and accountability in the utilization of public resources, while enhancing systems for accounting for development results; and
- **Financial Sector Development Reforms** – aimed at creating an enabling environment to facilitate smooth functioning of financial markets by removing bottlenecks that constrain the operations of the market.

Each of these five ongoing reforms has implications for education, three of which are direct. There is a direct correlation with issues emerging from the NIF III review, and recent international studies such as the UNESCO Education Policy Review¹⁵ and the World Bank PER/QSDS. These studies all emphasize the challenges of improving information for policy and management, and improving teacher management.

Decentralization is a major strategic area of 7NDP, which has major implications for the education sector, especially at the primary level. The two most important of these are:

- the need to **strengthen the management of teachers** who, at the primary level, will be deployed and managed through the district offices; and
- the need to **strengthen reporting and accountability**, so that the central authority is better positioned to monitor performance of districts and direct resources where they are most needed to achieve access, equity, quality and efficiency outcomes.

In view of this, ECE, primary and adult literacy will be decentralized to local authorities while at the same time functions will be devolved to provinces, districts and education boards. The MoGE currently has initiatives underway in these areas that are incorporated into the ESSP and are elaborated in sections below.

Information management. 7NDP includes a strategy entitled *Enhance National Data and Information Systems*. Both education ministries have already embarked on substantial initiatives to strengthen their information systems, and these will involve close collaboration with national initiatives to ensure alignment and efficiency. These initiatives are also incorporated into the ESSP.

3.10 OVERALL SECTOR PERFORMANCE

Achievements against NIF III targets

As part of the preparation for the ESA, the MoGE and MoHE undertook a review of the implementation of the NIF III, assessing the extent to which recommendations were implemented; as well as identifying achievements and challenges.

Of the 286 individual activities proposed in the NIF III, at least 72 per cent were reflected in annual work plans. The NIF III provided an elaborate framework of policy goals, objectives and activities that had a real impact on the annual work plans and budgets of most of the responsible units in the two ministries. Of these, 30 per cent of the activities were assessed to be 'on track', another 30 per cent 'partially implemented' and some 12 per cent initiated but 'off track' to achieve the NIF III targets. This suggests that the NIF III had a substantial impact on the planning capacities and effectiveness of the relevant ministries.

The ministries have been systematic in reporting against a very wide range of targets and indicators. The MoGE has provided a comprehensive Annual Progress Report (APR) each year, with in-depth analysis of the current situation, and the presentation of the best available evidence of performance against key targets. These reports have been adapted over time. The mainstay of this annual reporting, however, has been an update on performance, against the Performance Assessment Framework (PAF), and the revised Sixth National Development Plan (rSNDP) key performance indicators for the sector.

The PAF includes a selection of 33 indicators with targets against which progress is reported each year. Some APRs have included additional tables on progress against other selected output indicators. These APRs and the PAF and KPIs have constituted the main reporting mechanism on progress against the NIF III and the rSNDP. The NIF III also provided some 286 'Output Indicators', and while there has understandably not been full reporting against all of these, a review of the NIF III suggests that progress has been made against a significant number of them, indicating that the NIF III has had a substantial impact on the system.

¹⁵ UNESCO (2016), Zambia Education Policy Review: Paving the Way for SDG 4 – Education 2030

The ministries have performed relatively well *against the key policy and sector indicators*. Table 3.9 shows the main policy targets under the different scenarios and the actual achievement in 2015.

Table 3.9. Achievements against NIF III targets

Key Policy Indicators	2011 Baselines	2016 Actuals
% of pupils in community schools	16%	13%
Grade 7 Repetition	9.80%	6.70%
Transition rate: 7–8	64%	66.20%
Transition rate: 9–10	53%	46.60%
Pupil:teacher ratio (1–7)	51	42.3
Pupil:teacher ratio (8–9)	35	46.6
Pupil:teacher ratio (10–12)	29	35
Key Sector Indicators	2011 Baselines	2016 Actuals
Enrolments (1–7)	2,976,913	3,591,726
Enrolments (8–9)	429,455	491,204
Enrolments (10–12)	358,689	661,912
GER (1–7)	117.80%	104.10%
GER (8–9)	67%	59%
GER (10–12)	30%	23%
Completion rate 7	91%	92.40%
Completion rate 9	54%	68.80%
Completion rate 12	25%	52.70%
Teacher Numbers (1–7)	46,736	72,967
Teacher Numbers (8–9)	11,166	18,301
Teacher Numbers (10–12)	11,626	18,639

Source: Compilations from ESB, rSNDP and NIF III

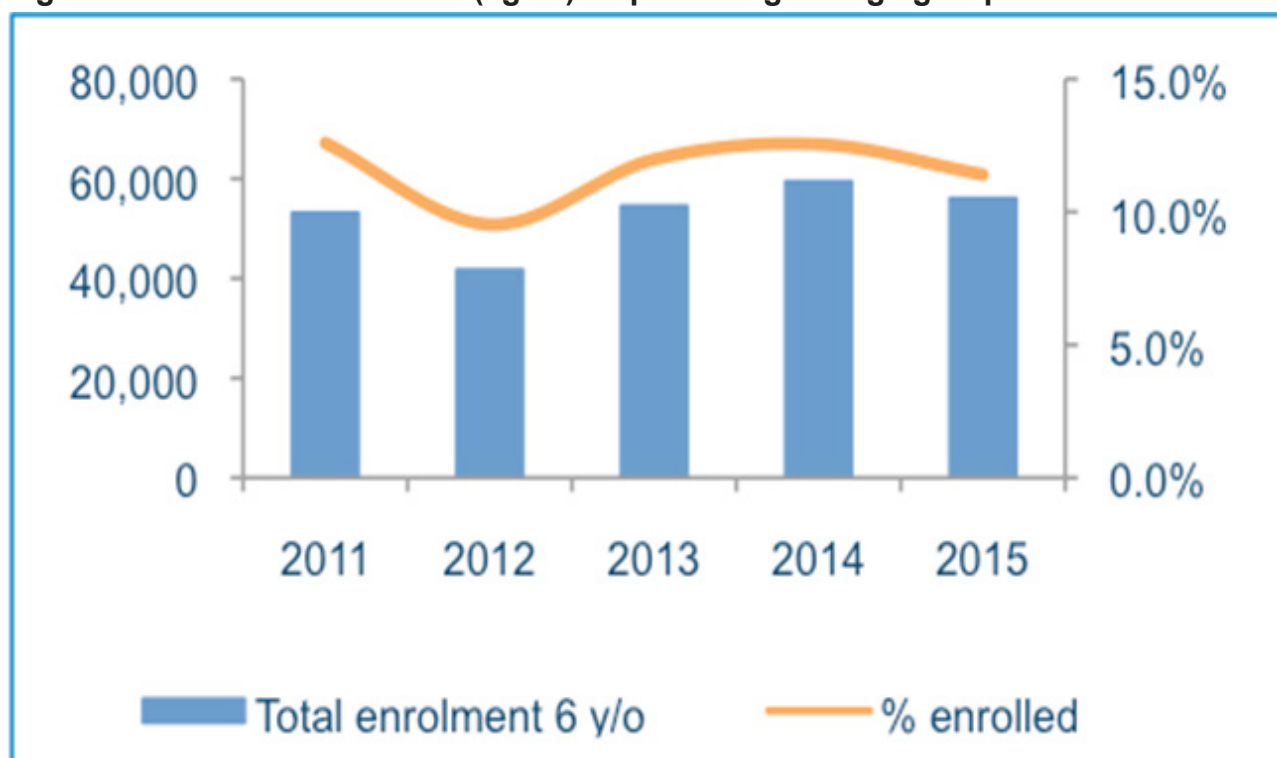
Access across the education sector

Although absolute enrolment numbers have been increasing steadily since the beginning of the millennium, the net enrolment rate (NER) at primary level has been decreasing since 2012 and the system is reaching the point where it will not be able to include all children of school-going age. The junior and senior secondary schools can only accommodate about 40 per cent of the secondary school-age population. Due to the fast population growth in Zambia, more children are excluded from the education system. The Out-of-school Children Diagnostic Study, undertaken in preparation for the ESA, shows that the percentage of six-year-olds enrolled in ECE is declining (Figure 3.7). Indeed, an analysis of out-of-school children (Table 3.10) suggests that substantial numbers of children are enrolled in school relatively late.

Table 3.10. Out-of-school children by age

	Age											
	7	8	9	10	11	12	13	14	15	16	17	18
Male	90,572	43,724	11,809	4,280	4,059	6,449	9,238	22,887	34,537	42,301	62,260	51,474
Female	79,206	32,157	2,349	1,896	2,309	3,835	8,107	23,238	38,978	54,028	80,018	83,163
Total	169,778	75,881	14,158	6,176	6,368	10,284	17,345	46,125	73,515	96,329	142,278	134,637

Source: DHS 2013–2014 and population estimates Zambia CSO 2010 census (2013 revision)

Figure 3.7. Enrolments in ECE (age 6) as percentage of age group

Source: EMIS 2011–2015

Learning outcomes

Progress in terms of quality improvement has yet to be revealed in improved learning outcomes.¹⁶ The NIF III included a strong focus on quality improvement, mostly in the form of improved inputs (such as teacher training and supply, learning environments, increased classrooms, textbooks and learning materials). It can take at least five years for this type of quality investment to pay off as improved learning, meaning that the success of these investments may well lie in the future. While the NIF III had extensive provision for output indicators, it did not provide the necessary intermediate outcome indicators that would show the extent to which these improvements are actually coming together at the teaching/learning interface. Recent studies, including the PETS and the Quality Service Delivery Survey (QSDS), suggest that progress in this regard is uneven.

The NIF III provided for significant strengthening of institutional leadership and management, and there has certainly been some progress at the output level in this regard (e.g., the number of school leaders receiving training). However, there is little evidence that the training so far provided to institutional heads is generating the needed improvements that will help to ensure improved teaching and learning. The MoGE is currently revisiting its model for Institutional Leadership and Management Development (ILMD).

Observed trends in learning achievement levels in the fifth grade indicate that learning achievement levels have remained relatively low, with no discernible improvements in the 18 years from 1999 to 2016 (Table 3.11). However, the results of the most recent (2016) survey at Grade 5 indicate that there have been some marginal gains in all the subjects tested. Concerted efforts are required to significantly raise learning achievement to acceptable levels.

¹⁶ In addition to examinations at the end of Grade 7, the Junior Secondary School leaving examination and the Grade 12 school leaving examination, Zambia has its own National Assessment Survey that was first conducted on Grade 5 in 1999 and then in 2003, 2006, 2008, 2013 and 2016. It has also conducted two assessments at Grade 9, in 2013 and 2016. This is a professional, well-developed system according to an evaluation conducted by the World Bank in 2013. Zambia also participates in the SACMEQ assessment exercises. In addition, an early-years learning assessment for reading and mathematics (EGRA/EGMA) was carried out in 2014 that tested approximately 5,000 Grade 2 pupils in the seven Zambian languages and mathematics using a type of early grade reading and mathematics assessment that has been used in multiple countries in recent years.

Table 3.11. Trends in Grade 5 learning achievement levels, 1999–2016

Mean Scores								
Year	1999	2001	2003	2006	2008	2012	2014	2016
English	33.2	33.4	33.9	34.5	35.3	34.1	32.1	34.9
Mathematics	34.3	35.7	38.5	38.5	39.3	38.3	35.5	37.0
Life Skills					40.2	37.3	35.3	38.7
Zambian Language	40.4	37.5	31.9	37.8	39.4	36.8	35.2	39.7

Source: ECZ NASs

The Grade 9 National Assessment Survey (NAS) was conducted in 2013 and 2016. Table 3.12 shows the results. There has been very limited progress, and girls outperformed boys in English while boys outperformed girls in maths and science. All the differences were small.

Table 3.12. NAS results for Grade 9 by subject and year

Subject	2013			2016		
	Boys	Girls	Total	Boys	Girls	Total
English	37.1	37.2	37.3	39.1	40.2	39.8
Maths	32.3	29.4	31.0	33.0	30.1	31.6
Science	40.0	37.4	38.4	37.9	36.5	37.2

Source: ECZ Preliminary findings of the 2016 NAS

Factors associated with learning achievement

There are a host of factors that National Assessment Surveys over the years have identified as being associated with learning achievement levels. As is common in most countries, students' characteristics such as home background and motivation are key. At school level the teachers' motivation and background are key. The most recent Education Sector Performance and Quality Service Delivery Survey (QSDS) tested pupils and teachers at Grade 5 and 9 levels. The survey team analysed the results and confirmed that the main driver of performance was indeed the pupils' own background. However, they also found at school level that the amount of grant the school received per child, a lower pupil:teacher ratio and longer school hours are 'significantly and positively correlated with student learning outcomes'. The sex of teachers and head teachers in some survey years appear to also relate to variations in learning achievement.

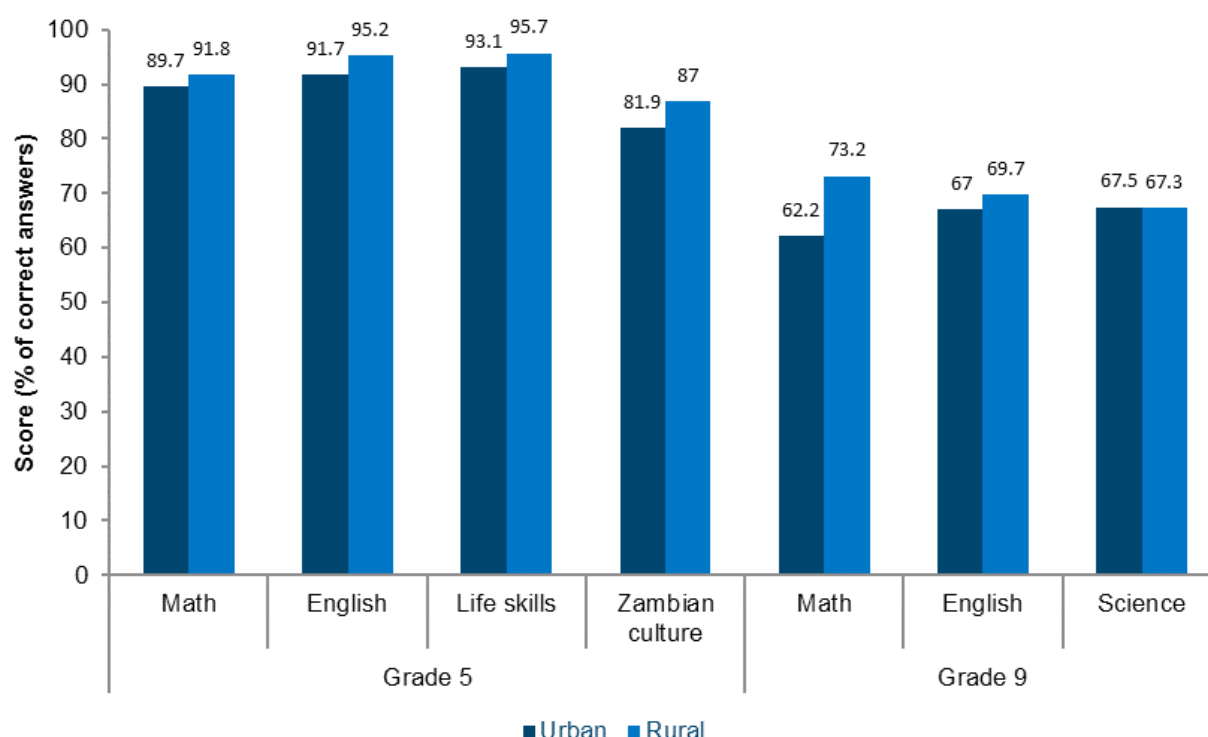
Certainly, teachers' subject knowledge is also a factor. With respect to the competencies of teachers assessed using the same tools as for students, one expects that teachers should be obtaining 100 per cent. Any item the teacher gets wrong invariably affects the attainment of learners. The Grade Nine National Assessment conducted in 2013 and 2016 also tested teachers on the same items as the pupils and found that they scored far less than the expected 100 per cent (Table 3.13).¹⁷ Figure 3.8 shows the scores received by teachers on the same tests administered to their students by the most recent PETS/QSDS (2015). This figure shows that teachers' scores for the Grade 5 subjects are mostly in the high 80s and above, whereas for Grade 9 their scores are much lower. Also, in general, teachers in the rural schools score better than their urban colleagues.

¹⁷This table shows strong improvements in teachers' scores from 2013 to 2016 in English and science, but a significant decline in maths. Such contradictory results may be the product of methodological issues.

Table 3.13. Trends in Mean pupil & teacher scores on Grade 9 National Assessments for the NIF III period

	Grade 9 Mean Scores			
	Pupils		Teachers	
	2013	2016	2013	2016
English	37.3	39.8	65.8	73.9
Mathematics	31.0	31.6	71.2	56.8
Integrated Science	38.4	37.2	67.6	74.5

Source: ECZ National Assessment

Figure 3.8. Teacher assessment in Grades 5 & 9: urban and rural variations

Source: 2015 PETS/QSDS

One important observation is that the results of these assessments are not rigorously analysed and discussed at district and school level to improve learning outcomes. This is an important omission. The UNESCO EFA study in 2015 concluded: “the significance of assessment to the post-2015 quality agenda cannot be overstated. Zambia has generally done well in carrying out summative assessments but needs to build an early warning system to gather achievement data continuously throughout the learning cycle in an aggregative manner so that policy actions derive from information based on real-time practice”.

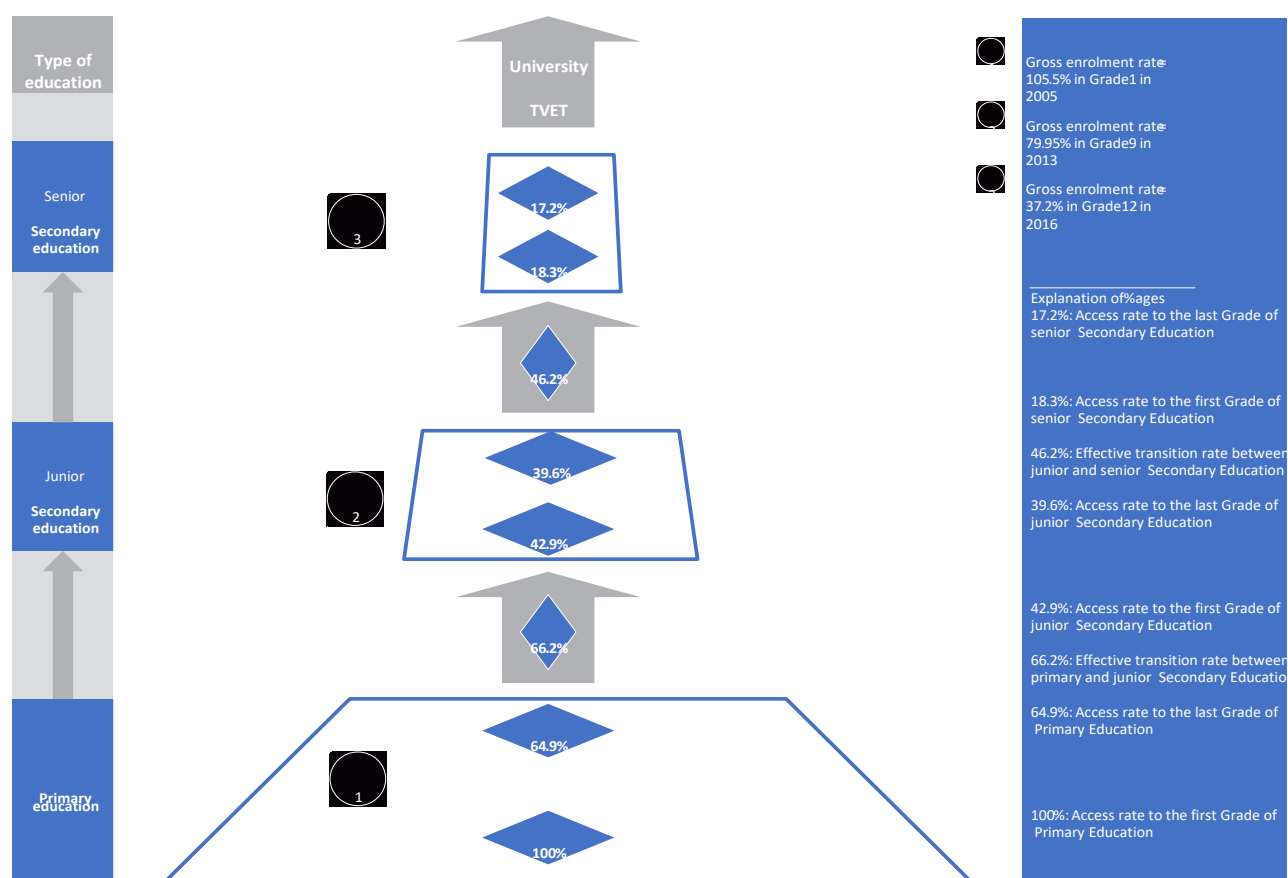
Internal efficiency

Low transition rates. Only a very small proportion of children who enter primary education transition through to higher education.¹⁸ Figure 3.9 summarizes the overall pupil flow through the schooling system up to the end of senior secondary level: it shows the share of pupils who complete and

¹⁸ The transition rates are based on the standard computation formula where the number of pupils/students admitted to the first grade of the higher level of education in a given year is expressed as a percentage of the number of pupils/students enrolled in the final grade of the lower level of education in the previous year. There are variations by province in terms of repetition rate. In 2016 Northern, North-Western and Southern had the highest Grade 1–7 repetition rates, at over 9 per cent, while Lusaka Province had the lowest at 3.7 per cent. The reasons for the high (and low) rates should be investigated and measures taken to reduce these rates.

transition without repeating; it captures the relatively low transition rate through the schooling system; and it signals a low coefficient of internal efficiency. A large share of pupils – almost all at the primary level – complete having repeated once or even twice.

Figure 3.9. Pupil flow through the schooling system (primary and secondary) 2016



Source: ESB 2012, 2016

Transition rates for girls are lower than those for boys. Northern Province has the highest transition rates while Southern and Central Provinces have lower transition rates. These low transition rates are mainly due to a significant shortage of senior secondary education places. The most pressing challenge for the transition from junior to senior secondary – affecting both boys and girls – is the limited school infrastructure. The majority of schools already apply a double-shift policy. However, there are still many areas with a pupil:teacher ratio (PTR) far above the national target of 40 learners.

Table 3.14. Transition rates Grades 9–10 by province: 2016

Provinces	Male	Female	Total
National	48.0%	45.1%	46.6%
Central	41.8%	35.8%	40.4%
Copperbelt	51.1%	51.5%	50.4%
Eastern	57.4%	47.2%	55.9%
Luapula	45.2%	32.9%	43.7%
Lusaka	45.4%	41.4%	43.6%
Muchinga	56.2%	45.7%	55.0%
North-Western	47.1%	36.9%	46.0%
Northern	83.9%	62.5%	78.0%
Southern	37.5%	31.8%	36.4%
Western	45.2%	38.1%	43.5%

Source: ESB 2016

High rates of repetition affect the internal efficiency of education systems mainly because of the cost of extra years that repeaters spend in school. Repetition rates are very high in primary school and at Grade 9 in secondary. There is no evidence that repetition helps children learn more. A separate problem is that the transition rate out of the primary cycle is about two thirds, meaning that one third of all young people completing primary school do not go on to secondary school. Table 3.15 shows this. Of interest also is the decline in the female dropout rates. The reasons for this could be investigated and ideally utilized to drive the dropout rates further down.

Table 3.15. Efficiency indicators in the Primary cycle by year and gender

	2009	2010	2011	2012	2013	2014	2015	2016
Transition Rate for G7/8								
Male	55.4%	62.1%	65.6%	63.1%	63.1%	59.1%	63.7%	65.3%
Female	56.6%	53.9%	54.6%	65.5%	60.6%	59.4%	65.5%	67.1%
Total	56.0%	57.9%	59.9%	64.2%	61.9%	59.3%	64.5%	66.2%
Repetition Rate for Grades 1–7								
Male	6.6%	6.7%	6.3%	6.3%	6.4%	7.4%	6.6%	6.9%
Female	6.1%	6.0%	5.8%	5.8%	6.0%	6.8%	6.2%	6.4%
Total	6.4%	6.4%	6.1%	6.0%	6.2%	7.1%	6.4%	6.7%
Dropout Rate for Grades 1–7								
Male	1.8%	1.9%	1.7%	1.6%	1.4%	1.5%	1.3%	1.3%
Female	2.9%	2.7%	2.6%	2.3%	2.1%	2.1%	1.9%	1.8%
Total	2.4%	2.3%	2.2%	1.9%	1.8%	1.8%	1.6%	1.5%

Source: ESB 2016. Note that the three indicators normally add up to 100%. Here the dropout rate does not reflect 'push out' between Grades 7 and 8.

Table 3.16. Efficiency indicators in secondary education by year and gender

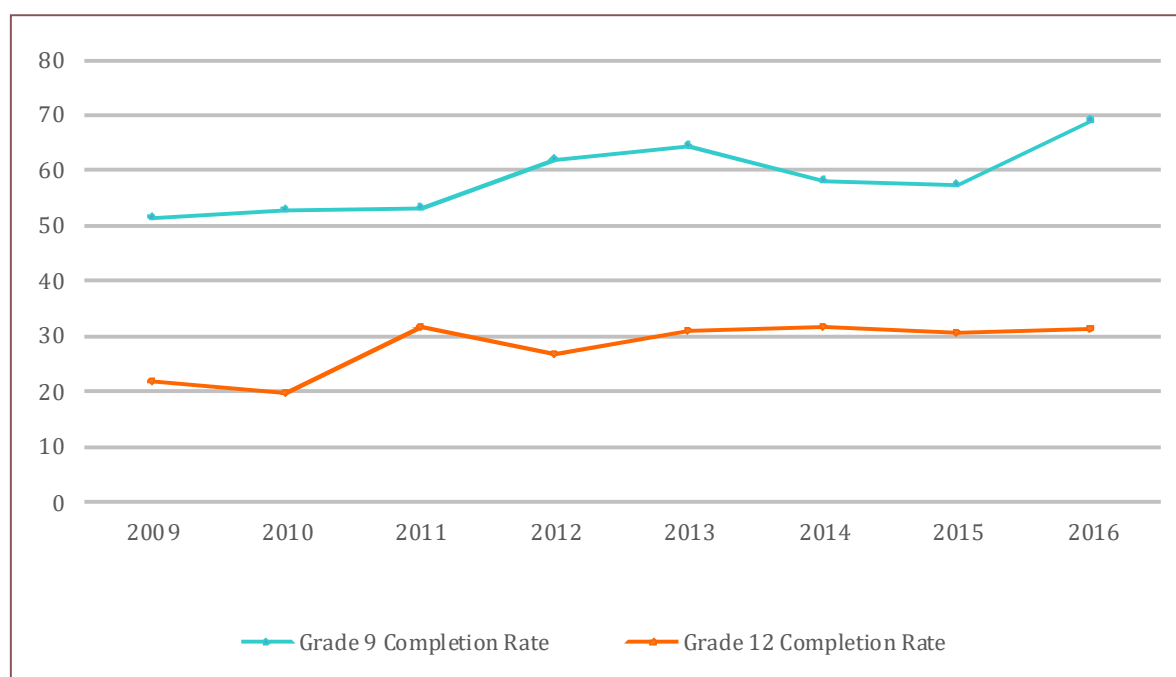
	2009	2010	2011	2012	2013	2014	2015	2016
Transition Rate Grades 9–10								
Male	41.4%	45.3%	46.0%	46.5%	43.6%	42.0%	47.4%	48.0%
Female	40.7%	44.8%	44.8%	47.0%	42.7%	42.3%	44.8%	45.1%
Total	41.0%	45.0%	45.5%	46.7%	43.2%	42.2%	46.2%	46.6%
Repetition Rate Grades 8–12								
Male	7.2%	1.3%	0.9%	0.9%	0.9%	1.5%	1.2%	1.5%
Female	6.7%	1.3%	1.3%	0.9%	1.1%	1.5%	1.4%	1.6%
Total	7.0%	1.3%	1.1%	0.9%	1.0%	1.5%	1.3%	1.6%
Dropout Rate Grades 8–12								
Male	0.6%	0.6%	0.9%	0.5%	0.7%	0.6%	0.5%	0.7%
Female	1.8%	1.6%	2.2%	1.6%	1.7%	1.8%	1.9%	1.8%
Total	1.1%	1.1%	1.4%	1.0%	1.2%	1.1%	1.1%	1.2%

Source: ESB 2016. Note that the three indicators normally add up to 100%. However, 'push out' rates between Grades 9 and 10 have not been reflected.

Repetition and dropout rates are lower in secondary education, as fewer than 2 per cent of learners repeat or drop out. However, the dropout rate for girls is almost double than for boys. In addition, repetition is high in Grade 9, presumably because learners aim to succeed in the Grade 9 examination to gain entry to senior secondary school. Less than 50 per cent of learners make it from junior to senior secondary education.

Completion rates¹⁹ are another important indicator of internal efficiency. Figure 3.10 shows that Grade 9 completion rates have been under 70 per cent since 2009. Completion rates at Grade 12 level have been around 30 per cent since 2011. Both trends confirm the limited internal efficiency of the Zambian education system.

¹⁹ The completion rate is defined as the number of learners who have completed a given grade minus the number of repeaters in that grade expressed as a percentage of the total number of learners of official school age for that grade.

Figure 3.10. Completion rate trends: 2009–2016: junior and senior secondary

Source: ESB 2016 and calculations for Grade 12

The coefficient of efficiency and the years per graduate are summary indicators of internal efficiency (see Table 3.17). The coefficient of efficiency simply compares the theoretical number of years (in the absence of repetition and dropout) to produce graduates with the actual number of years needed to produce graduates (including the years spent on repetition and dropout) given the current system. The primary cycle is relatively inefficient because of its high repetition. The average graduate takes two more years of schooling than they should. Despite the lower repetition rates, the secondary cycle is less efficient in terms of graduates produced (where a graduate counts as reaching Grade 12 and not necessarily passing the final examination). This is almost entirely owing to the large dropout rates between Grades 9 and 10.

Table 3.17. Summary internal efficiency indicators, 2016

2016	Primary	Secondary
Coefficient of efficiency (%)	74.6	60.1
Years per graduate	9.38	8.25

Source: ESB 2016.

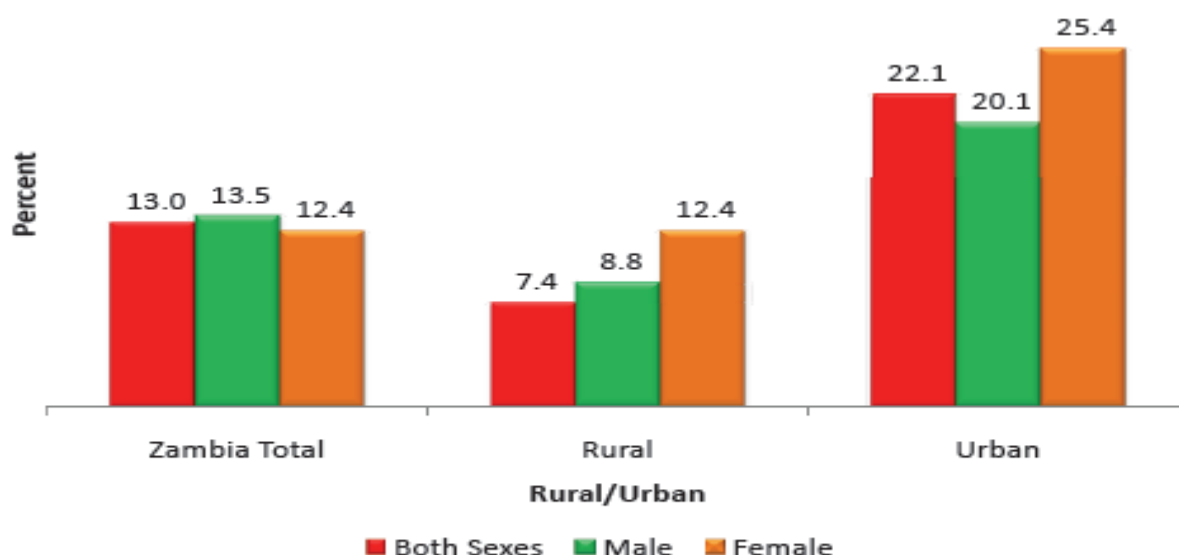
Notes: (i) These statistics were calculated using a reconstructed cohort analysis using data from 2015 and 2016. (ii) The calculations are based on standard UNESCO definitions. The years input per graduate takes account of all the additional years in the system by repeaters and by students who drop out.

External efficiency and the labour market

The standard point of reference of external efficiency concerns the use by individuals of the knowledge and skills acquired through their education during adulthood. External efficiency refers to the extent to which education contributes to individuals' social utility, as well as the personal benefits of education received. Economic impacts refer mainly to the relationship between education and the employability and productivity of school and higher education leavers, but also to the contribution of education to economic growth. The social dimension covers a variety of aspects, including mortality, health, fertility, civic attitudes and environmental awareness. The economic impact of education is mainly appraised through the matching of demand and supply for skills and knowledge. Education and training are expected to enhance employability and productivity on the labour market. For employers, education should enhance human capital and the productivity of companies.

According to the International Labour Organization's definition of unemployment, the formal unemployment rate is generally low in Zambia. A significant challenge is the mismatch between skills training and employment opportunities, which has proven a complex issue to tackle for GRZ. Figure 3.11 shows the unemployment rates for the population of 12 years and older by sex and rural/urban distribution in 2010. Overall, the unemployment rate was 13.5 per cent for males and 12.4 per cent for females. Unemployment rates were higher in urban areas than in rural areas. In rural areas, males recorded a lower unemployment rate (8.8 per cent) than females (12.4 per cent). Similarly, in urban areas males recorded a lower unemployment rate (20.1 per cent) than females (25.4 per cent). Whereas the precise numbers may vary in 2017, the key issues are likely to remain the same.

Figure 3.11. Unemployment rates (12 years and older) by age, sex and rural/urban



Source: CSO - 2010 Census of Population and Housing

More than three million Zambians work in the agricultural sector. More than 85 per cent work in agriculture in rural areas and 14 per cent in urban areas. The highest proportions of the urban population work in the trade and services sectors. Wholesale and retail trade are especially important as a source of employment for women in urban areas, with more than 36 per cent of them working in this industry, compared with 21 per cent of males. The service sector employs around a fifth of workers in urban areas, while manufacturing employs 9 per cent of male urban workers, the transportation sector 11 per cent and construction another 8 per cent.

According to the 2014 Labour Force Survey, about 84 per cent of the working population was employed in the informal sector (91.2 per cent for females, 75.8 per cent for males). Informal employment between 2005 and 2014 remained high, at between 84 and 89 per cent of the total number of people employed.

The evaluation of the Zambian labour market is complicated due to its fragmentation. For instance, in rural areas there are substantial differences in the returns to education from self-employment and other employment. In urban areas, moreover, there are noticeable discrepancies between the returns to education in formal and informal employment as well as within formal employment between the public and private sector. Returns to primary education are virtually non-existent in urban areas, with higher returns for secondary and higher education. In rural areas, returns to primary education are positive and similar to returns on secondary and higher education. Returns to education for rural residents are higher for those employed than for the self-employed. Urban residents working in the informal sector obtain a bigger return on their education than formal sector workers. Public sector employees with less than completed secondary education earn more than their private sector counterparts, but government employees with completed secondary education earn less than those working in the private sector. Government employees with higher education degrees earn less than those with similar qualifications employed in the private sector.

With the 7NDP, the GRZ placed emphasis on continuous review of the curriculum in collaboration with stakeholders, including industry. It will undertake continuous revision of curricula at all levels of education to enhance the relevance of the education system for the labour market. This will include a focus on important contemporary global market skills needs, such as science, mathematics, technology, innovation, entrepreneurship and strategic leadership training.

3.11 EARLY CHILDHOOD EDUCATION (ECE)

GRZ recognizes the important role ECE plays as the foundation for learning. The Education Sector Analysis (ESA) shows that GRZ's involvement in ECE has, in the past, been minimal and was limited to enabling individuals and organizations to establish and manage ECE centres. In this regard, the mandate for ECE was moved in 2011, from the Ministry of Local Government and Housing to the then MoE. Since then, however, GRZ involvement has changed and the MoGE has made major strides in building the capacity for management, coordination and delivery of ECE at all levels. In 2015, the MoGE established the Directorate of ECE (DECE) with a full staff establishment. Available resources are limited, however. DECE's major role has been to preside over and coordinate matters pertaining to ECE provision, particularly in developing framework documents on improved access and quality.

Access and participation

ECE has mainly been provided by the private sector and non-governmental organizations (NGOs). Since 2012, however, the MoGE has also established ECE centres – which, in fact, are mostly pre-schools that are simply annexed to existing primary schools. In 2015, in collaboration with other stakeholders from civil society, cooperating partners and faith-based organizations, a total of 1,526 classes had been established in public ECE centres with 70,776 learners, out of a projected total eligible population of 2,067,309. Due to a further expansion of facilities in 2016 the number of ECE centres increased to 1,849 with a total of 160,424 learners (77,993 males and 82,431 females), from a total eligible population of 2,118,289 (3–6-year-olds). However, the rate of enrolment is still below 10 per cent of the total population of the target age group.

Quality and relevance

The development of a standardized national teacher education curriculum is supporting the provision of trained teachers that can apply the child-centred and play-based methodologies required at ECE level. ECE training is now being offered in 11 public Colleges of Education. Since 2014, 1,250 trained teachers have been recruited by GRZ and deployed in established ECE centres. However, many teachers trained at ECE level are in fact employed in primary schools.

In addition to addressing ECE teacher standards, the MoGE has developed standard mechanisms for systematic assessment of learning outcomes as well as ECE Standard Guidelines for monitoring. Furthermore, a core package of materials has been developed, comprising teacher guides and learner books in seven local languages. Through working with the Curriculum Development Centre (CDC), implementation of the revised curriculum and the provision of teaching and learning materials to ECE centres has continued and accelerated.

Equity

The majority of GRZ-supported ECE centres are concentrated in rural and peri-urban areas with the urban areas serviced mainly by the private sector. Government involvement in ECE service provision has focused on opening up access in rural areas that have been the least served to date. The gender parity index in ECE centres is 1.08, indicating a slight bias in favour of girls. There is, however, some variation between provinces, ranging from 1.19 in Eastern to 1.04 in Northern and Southern Provinces. It is also worth noting that the share of girls with pre-school experience enrolled in Grade 1 is only about 40 per cent.

Access to ECE is very limited for children with special education needs, though specific data on this category are not available. ECE offers a window of opportunity to identify and intervene, to address the challenges faced by these children – but the absence of guidelines and assessment tools means that this is not exploited.

Management and governance

Efficiency and effectiveness in ECE is adversely affected by inadequate human resources for managing, implementing, delivering and monitoring ECE. In addition, teachers have inadequate pedagogical skills and are not supported through continuing professional development (CPD). Furthermore, the handling of young children requires the presence of caregivers or teachers' assistants, which is not taken into account in the recruitment of ECE personnel. Caregivers are often supported by communities as their contribution to ECE.

There has been some progress, especially in formulating the ECE policy (which is part of the overall general education policy which is awaiting approval from the Cabinet Office). The draft ECE policy presents GRZ's policy intentions with regard to this sub-sector. Additionally, a Policy Implementation Plan (PIP), established in 2016, articulates the policy priorities, strategies and implementation approach to be deployed over the next five years. Equitable access to ECE and quality improvement through strengthened partnerships are the key elements of the ECE policy.

Efforts are also underway to establish appropriate structures for ECE at each decentralized level of the system. As mentioned above, DECE has been established at HQ and proposals have been made to establish positions for ECE at provincial and district levels. For effective implementation of sub-sector goals, the institutional frameworks that existed before 2011 are now being realized by establishing appropriate ECE structures and functions, though for now such functions are being implemented by assigning new responsibilities to existing ECE staff rather than creating new positions.

ECE is a relatively new sub-sector and raising awareness of its importance in improving learning outcomes is still a challenge. However, the MoGE has worked closely with various partners in terms of sensitization and social mobilization on ECE, targeting policy makers, programme implementers, traditional leaders and communities. This represents an important strategy to improve the supply of ECE services and increase social demand for services by mobilizing sufficient community and private sector support to enable Zambia to make progress towards its ambitious ECE sub-sector goals. A notable result of the sensitization and community mobilization effort has been the high demand for services in some areas, as evidenced by large class sizes.

Key issues for ECE

- (a) Insufficient public funding and spending for ECE activities. The budget for ECE is still relatively low, and there are differences between what is budgeted, allocated and spent. During the period 2011 to 2015, the MoGE hardly had financial means to implement its policy ambitions for ECE. With an allocation of ZMW46.5 million in the 2015 budget (0.5 per cent), it was the second smallest among the eight education programmes, from which the vast majority (ZMW42.3 million) was allocated for infrastructure development.
- (b) There are challenges in demonstrating the benefits (economic, social, etc.) of ECE provision. One of these challenges relates to the lack of systematic documentation of normative data in developmental milestones of children aged 0–6 in the Zambian context. In addition, there is currently no standard mechanism in place for systematic assessment of learning outcomes at the ECE level, although the newly developed ECE Standard Guidelines will provide a standard monitoring tool. It will be important to ensure that the newly developed school readiness assessment tool is fully implemented. At government level, there needs to be greater appreciation of ECE's importance/benefits and subsequent budgeting, allocation and expenditure commensurate with the tasks at hand, and continuous engagement at community level, to ensure parents send their children to the ECE centres.

- (c) While the role of non-government actors (private sector, NGOs) is crucial in ECE provision, there are persistent challenges related to planning and management. One such challenge is that there is a complete absence of data from private providers of ECE, and there has also been little systematic collection of reliable age-grade data (except for data collected from public ECE centres annexed to primary schools from 2015). The lack of data hinders the computation of critical indicators such as the NER, and makes coordinated, coherent planning difficult.
- (d) Access is hampered by two factors: (i) learners often have to travel long distances to attend ECE centres, especially in rural areas; and (ii) infrastructure is inadequate and inappropriate. The classrooms are annexed onto regular primary school classrooms and have not been adapted for their purpose; e.g., the furniture is not appropriate for ECE learners and water points as well as sanitation facilities are not age appropriate. The play parks are bare or have very few resources in them. The current distribution of ECE service is biased towards private provision in urban settings, with the majority of young children in the rural areas not able to access any services.
- (e) Equity is an issue because of the lack of integration of special needs in ECE provision. There are few opportunities for children with special educational needs at ECE in terms of adequate infrastructure, trained SEN teachers, and equipment and materials. ECE provides a strategic window for early identification and intervention for children with special educational needs, but GRZ is not yet capitalizing on this opportunity.
- (f) Low and poor quality of ECE services in most centres across the country. This is mainly owing to insufficient numbers of teachers, and the lack of age appropriate teaching and learning materials and equipment. It is also a result of inadequate human resources for managing, implementing, delivering and monitoring ECE. For example, not only is the number of teachers being trained and supplied at ECE level (many teach in primary schools) inadequate, but those that are teaching at ECE level have limited pedagogical skills and are not supported through CPD.
- (g) There is currently no standard mechanism in place for systematic school readiness assessment at the ECE level, although the newly developed ECE Standard Guidelines will provide a standard monitoring tool. It will be important to ensure that the newly developed tool is fully implemented.
- (h) Lack of integrated multisectoral approaches to supporting ECE and mainstreaming of cross cutting issues.
- (i) Lack of smooth transition mechanisms to Grade 1 for ECE learners.

3.12 PRIMARY EDUCATION

The primary education sub-sector is the largest in terms of budget and the number of schools and learners. This sub-sector has grown significantly, with an increase of 9 per cent in the number of schools: from 8,013 in 2007 to 8,823 by 2016, with enrolments going from 3,030,120 in 2011 to 3,203,220 in 2016. The increase can be attributed to many factors, which include: continuous infrastructure constructions; implementation of the free primary education policy re-introduced in 2012; implementation of a 50:50 enrolment initiative at entry grade level (Grade 1); implementation of the re-entry policy for post-partum girls and the school feeding programme. The recommended age range for primary school learners is 7 to 13 years. These enrolment increases of an average of 1.1 per cent per year between 2011 and 2016 have not kept up with school-age population growth, which is at 2.9 per cent.

Access and equity

Primary education averaged an annual growth from 2011 to 2016 of 2.0 per cent: 1.7 per cent for boys' enrolment and 2.2 per cent for girls' enrolment. Girls now slightly outnumber boys in the primary sector (GPI=1.01). In the period 2011 to 2015, there was an increase in the number of schools (including government, private, church and community), but the pace of growth has slowed more recently. Figure 3.12 summarizes the recent trend.

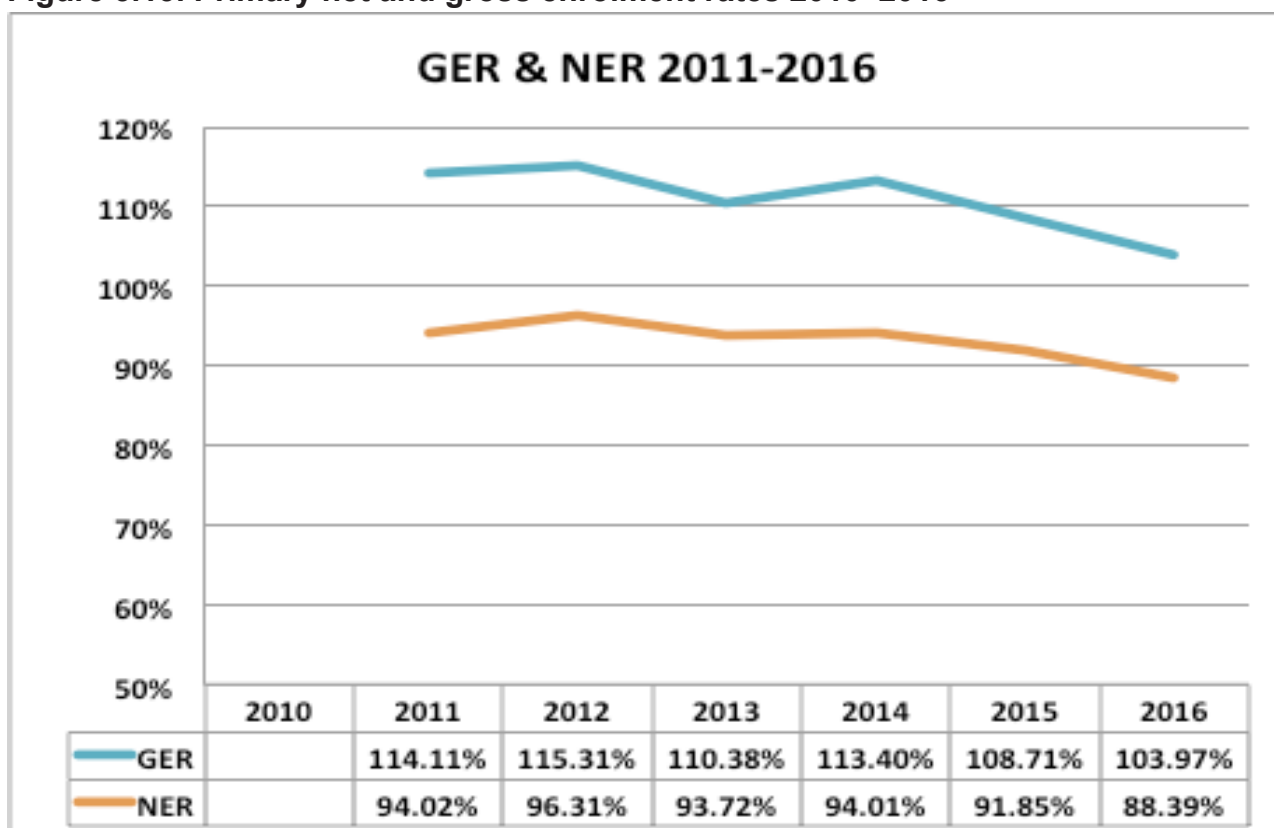
Figure 3.12. Number of schools by authority



Source: ESB, 2016

As seen in Figure 3.13, there is a declining primary net enrolment rate (NER). Only 46.5 per cent of the males and 47.6 per cent females in Grade 1 were of the legal entry age in 2016. Although the enrolments of seven-year-olds are below 50 per cent, the school system has the capacity to enrol all seven-year-olds as their places were taken by mostly over-aged and a much smaller number of under-aged children.

Figure 3.13. Primary net and gross enrolment rates 2010–2016



Source: ESB, 2016

Enrolment growth has stagnated since 2014, especially in the number of children of primary school age (7–13), meaning that the total number of primary school-age children out of school has started to increase; this is a serious reversal of the positive trends from the past. In other words, enrolments have not been keeping up with population growth.

Quality and relevance

Assessed in terms of measured learning outcomes, the evidence suggests that learning achievements of primary education outcomes did not improve substantially from 2011 to 2015 (see Table 3.11). There also appears to be a gender gap in learning performance, with girls underperforming. The gap appears to be closing.

The MoGE has worked with partners to develop the National Learning and Assessment Framework (NLAFF). This will provide a systematic mechanism for ensuring a more consistent approach to learning assessment, analysis of the data and dissemination of the findings throughout the system and particularly for teachers to improve classroom instruction.

Progress in classroom construction has fallen well behind demand and is not even keeping pace with population growth. Thus, the 2016 Joint Annual Review (JAR) reported that the following were constructed (against the targets indicated in brackets):

- 162 classrooms (434 classrooms);
- 145 houses (222 houses);
- 162 D/VIP latrines (203);
- 151 S/VIP latrines (171 S/VIP latrines); and
- 4,582 double-seater desks were manufactured and distributed to schools countrywide.

Pupil:classroom ratios in 2016 were high, and very unevenly distributed across provinces. The national average ratio of classes per classroom in 2016 was 1:49, with the average ratio in the provinces varying from 0:97 in Lusaka to 2.60 in Luapula.

Pupil:teacher ratios (PTRs) also vary substantially between provinces, ranging from 55:1 in Eastern Province to 31:1 in Copperbelt. There are considerable inequities in PTRs across provinces and between urban and rural schools. This issue is discussed in more detail in the section on teachers and teacher management, below.

The primary curriculum has been revised, and all teachers given orientation. Implementation of the new curriculum remains an ongoing task that will extend well into the next ESSP period. The revised curriculum includes provision for the use of local languages in teaching and learning, which should have a significant impact on the quality of learning and of the learning experience for learners in early grades. The MoGE, with the assistance of CPs, supported the implementation of the revised curriculum by rolling it out – procuring and distributing teaching and learning materials to all ten provinces. While this was an important investment, it may be some years before the new curriculum has a significant impact on learning outcomes.

Meanwhile, textbook availability continues to be a substantial challenge. According to the 2014 PER, five primary students shared one or less textbook for each subject, 1 for Mathematics, 0.9 for English and 0.9 for Science.

Table 3.18. Number of textbooks to number of primary school pupils, 2016

	English	Life Skills	Maths	Zambian Languages
National	1/4	1/6	1/4	2/7
<i>Provinces</i>				
Central	1/6	0.20	1/7	1/6
Copperbelt	1/3	0	3/8	1/3
Eastern	1/7	0	1/7	2/9
Luapula	3/8	1/8	1/5	2/9
Lusaka	1/8	1/5	1/8	2/7
Muchinga	1/4	1/3	5/9	1/4
North-Western	1/3	1/8	2/9	1/4
Northern	1/4	1/4	1/4	1/5
Southern	2/9	0	1/5	1/4
Western	1/6	1/5	1/9	1/5

Source: ESB 2016

There are large differences in the requirements to operate a school in an urban and rural setting. Estimates are that 80 per cent of primary schools are not electrified, and those without electricity are mostly in rural areas. Challenges are also reflected in the lack of physical facilities in rural areas, such as the school buildings, and the shortage of teaching and learning materials. In addition, the retention of teachers in rural settings is a serious challenge.

Providing education for children with special educational needs is costly and the limited availability of resources hampers full implementation of policy goals. While this provision is included in all education policies and strategies, there are no guarantees for children with special educational needs and their parents that these policies are prioritized and actually implemented. With so many competing priorities, this group of children is rather neglected. Special education provision may be strengthened by legislation and the provision of a dedicated budget line. This is because, until legislation is passed, education authorities are not required to implement measures for children with special educational needs.

The MoGE is also piloting the 'Catch-Up Programme' that began in November 2016. The pilot is using a multi-stakeholder approach supported by CPs. The programme groups pupils according to their ability levels rather than grade level or age for a targeted period of time. With teaching targeted to pupils' abilities, appropriate materials for each ability level, specific training for teachers, and adequate supportive monitoring mechanisms in place, the evidence of the success of these programmes is strong and indicates that such programmes allow pupils to catch up and progress in their education.

External support has helped the MoGE to develop in-service training for community school teachers using a five-step process for teaching reading. Some community schools are now doing better than public schools. Community school teachers seem to spend more time with pupils and are more effective and motivated in the classroom.

Management

Actual time spent in school is a source of substantial concern, in particular the fact that (according to the ESB) only an average of 4.2 hours a day are spent in classroom instruction in Grades 1–4, while Grades 5–12 spend on average of about six hours. The norm, for Africa and elsewhere, is about five hours of classroom work each day at the lower basic level and about six hours at the upper primary and secondary school levels. The short teaching day clearly contributes to learners' low levels of learning acquisition in reading, writing, numeracy and communication, and generally poor performance in school.

In addition, the time that teachers spend in the classroom teaching gives cause for concern. The PETS survey found that only 52 per cent of teachers were in the classroom teaching during random visits.

Financing continues to present challenges to the sub-sector. Table 3.19 shows the financial allocations and expenditures to primary education and includes all salaries at primary school level, school grants and school infrastructure development. In nominal and constant terms, the expenditure on primary education has increased over the NIF III period. Also, in relative terms, the share of primary education as a percentage of total public education expenditure rose from 43 per cent in 2011 to 58 per cent in 2014. Part of this increase can be attributed to the wage increases in 2013 that had a high impact on the primary education sub-sector because of the larger share of teachers in this sub-sector.

Financing of operating costs at school level continues to present a problem. While the budget execution of primary education has been close to 100 per cent, the execution of school grants through the DEBs varied by province. The PER (2015) concludes that in 2013, 28 per cent of schools did not receive a school grant. The other 72 per cent of schools received a grant of on average ZMW15 per student. This average amount is, however, a misleading indicator as there is a significant difference in the amount of school grants received (see Figure 3.3). According to the PETS study (2015), about 55 per cent of primary schools charge school fees, while only 34 per cent of students actually pay them.

Table 3.19. Financing of primary education (million ZMW)

Primary Education*	2011	2012	2013	2014	2015	2016
Approved budget estimate	1,998	2,131	3,054	4,808	5,318	5,395
Total authorized provision	1,998	2,162	2,973	4,808	5,179	5,470
Actual expenditure, nominal	1,463	2,083	2,994	4,648	4,877	5,431
Actual expenditure, constant	1,463	1,976	2,775	4,297	4,877	5,431
Funding rate%	100%	101%	97%	100%	91.7%	100.7%
Execution rate%	73%	96%	101%	97%	94.1%	99.3%
Primary as % of Total ed. expend.	43%	46%	57%	58%	55.9%	58.2%

Source: computed from MoF Financial Reports Statement C, 2011–2016 Includes both schools operating G1–7 and schools operating G1–9.

To improve the financial situation in schools, the MoGE is working on a pilot of transmitting school grants directly into the school's bank account. This initiative will be combined with capacity development in financial management at school level. The (pro-poor) allocation formula is not fully functional. Provinces below the national average income level do not necessarily receive a higher share of the budget when compared to the share of school-aged population in the province.

Key issues for primary education

- (a) **Implementation of the revised curriculum remains an ongoing task.** This includes: rolling programmes/initiatives out, procurement and distribution of teaching and learning materials, improving teacher competences, and supporting teaching and learning in local languages).
- (b) **Repetition rates at almost 7 per cent are too high in primary school.** There is no international evidence that repetition helps learning, and encouraging automatic promotion would free up resources currently being used by repeaters.
- (c) **Ongoing devolution of education functions to local authorities.** The decentralization policy was approved in 2002 and revised and relaunched in 2013. Work continues but a good deal more is needed to prepare staff in provinces and districts for their new roles.
- (d) **Actual time spent in school is a source of substantial inefficiency (and inequity) which needs urgent attention.** Of great concern is the fact that only 4.2 hours (instead of 5 hours) a day are spent in classroom instruction in Grades 1–4 while Grades 5–7 spend on average 5.6 hours (instead of 6 hours) and 8–12 spend an average of 6.4 hours. The short teaching day

clearly contributes to learners' low levels of learning acquisition in reading, writing, numeracy and communication, and generally poor performance in school.

- (e) **Financing of operating costs at school level continues to present a challenge.** The execution of school grants through the DEB offices remains a challenge as some resources are not released to the schools and end up being used by the DEBs office;
- (f) **There is a lack of a structured programme management unit within MoGE** to address issues such as school health and nutrition, and comprehensive sexuality education, as these issues are covered by different Directorates.
- (g) **There is a lack of structure at central level to oversee** community schools.
- (h) **The cost of education provision to children with special educational needs is high.** Limited availability of resources hampers full implementation of policy intentions. While provision for children with special educational needs is included in all education policies and strategies and there is every good intention, there are no guarantees for children with special educational needs and their parents that these policies are prioritized and actually implemented.
- (i) **There are challenges in providing equitable access to children in remote areas.** Despite an increase in the number of school places and the construction of more schools, primary education has lost places. Primary schools have lost a number of classes to secondary schools because of the upgrading, while some classrooms are also being converted into ECE centres.
- (j) **Slow implementation of the home-grown school feeding programme** is affecting the overall educational impact on key indicators.
- (k) **Enrolment growth has stagnated since 2014**, especially in the number of children of primary school age (7–13), meaning that the total number of primary school-age children out of school has started to increase. An additional challenge is that children often do not enter the education system at the appropriate age.
- (l) **Low learning achievement** scores for most of the standardized national, regional, international assessments and successive public examinations, all of which suggest that children are drifting through the school system with very low mastery of desired learning competencies. Appropriate-age enrolment helps learning. Increasing, ideally to 100 per cent, the number of seven-year-olds in the population enrolling in Grade 1 is a very low-cost, high-impact intervention.
- (m) **Pupil:teacher ratios vary substantially between provinces**, ranging from 80:1 to 31:1 in certain provinces. There are disparities in the distribution of teachers, with rural schools generally having fewer teachers than urban schools.
- (n) **Most community school teachers** lack formal teacher training and are not well compensated.
- (o) **Sources of power are a challenge.** Estimates are that 80 per cent of primary schools are not electrified and most of those without electricity are in rural areas.
- (p) **Language of instruction affects learner performance**, especially in the early grades, as some teachers are deployed where they are not familiar with the language of instruction.
- (q) **High rates of teacher absenteeism**; even when teachers are present in the school more than one third are not in classrooms teaching or they are in classrooms but not teaching.

3.13 SECONDARY EDUCATION

Zambia's secondary school sub-sector spans five years of post-primary education. It is divided into two years of junior secondary (Grades 8–9) and three years of senior secondary (Grades 10–12). Junior secondary is intended for learners aged 14 and 15 with terminal examinations at Grade 9. Senior secondary is intended for learners aged 16–18; at the end of Grade 12, learners write school certificate examinations. Both Grade 9 and Grade 12 examinations are public examinations, set and marked by the ECZ. On the basis of performance in the Grade 9 examination, about 45 per cent of the school candidates proceed into Grade 10. Admission to higher institutions for higher education, training and prospects for wage-sector employment hinge critically on school certificate

performance. This accounts in large measure for the intensity of the pressure to enter and stay in school until this point.

The curriculum has also been linked at all the levels, from ECE to tertiary education and adult literacy. The necessary career paths for learners at secondary school level have been provided. This will give learners the opportunity to progress according to their abilities and interests. There are two career pathways at this level, academic and vocational. The academic pathway is meant for learners with a passion for academic subjects and desire for careers in that direction. The vocational career pathway is for learners with ambitions and interests in technical and practical jobs. The curriculum will provide practical skills to such learners starting at Grade 8 through to Grade 12. In the provision of this curriculum, schools will collaborate closely with trade institutes and other key stakeholders in various areas of specialization.

The introduction of students to vocational education is meant to increase the base for students to take vocational subjects at secondary school level; increase catchment numbers of children to enrol in TEVET institutions; inculcate a spirit of entrepreneurship in the children so that they could fall back on the skill in case they fail to proceed to the next education level; and increase the number of Zambians that have the skills to foster socio-economic development.

Access, equity and internal efficiency

The ministry continues to improve access to secondary education, but challenges remain and growth in the sector falls far short of NIF III targets. Progress against the number of new secondary schools required to accommodate prospective secondary school students is alarmingly limited. According to the PETS/QSDS Report (2015):

The education reforms of 1996 proposed that schools be transformed from primary (grades 1–7) into basic (grades 1–9), and secondary (grades 8–12) into high (grades 10–12). However, out of the 8,493 primary schools only 3,176 have been transformed to full basic schools, while of the 644 secondary schools only 232 have been transformed into high schools. This means that only a small number of schools adhered to the policy directive while a large number of schools did not.

Table 3.20. Enrolments by sex, year, grade and grade group 2010–2016

Grades	Year						Average annual growth rate 2011 - 2016
	2011	2012	2013	2014	2015	2016	
Grade 8 Total	191,992	222,959	222,086	230,855	235,631	238,744	3.7%
Male	100,889	114,982	114,260	117,902	120,535	121,715	3.2%
Female	91,103	107,977	107,826	112,953	115,096	117,029	4.3%
Grade 9 Total	188,578	233,325	229,077	242,759	235,330	252,460	5.0%
Male	101,560	125,012	122,592	126,728	122,130	130,780	4.3%
Female	87,018	108,313	106,485	116,031	113,200	121,680	5.7%
Grade 10 Total	74,501	102,793	98,367	113,194	111,802	104,750	5.8%
Male	40,398	55,976	53,219	60,675	60,156	56,144	5.6%
Female	34,103	46,817	45,148	52,519	51,646	48,606	6.1%
Grade 11 Total	87,307	96,365	102,996	109,677	114,483	118,463	5.2%
Male	44,409	54,376	55,603	59,179	61,828	63,466	6.1%
Female	42,898	41,989	47,393	50,498	52,655	54,997	4.2%
Grade 12 Total	81,211	88,553	90,649	105,109	105,095	107,743	4.8%
Male	45,322	49,126	49,494	57,107	57,635	58,277	4.3%
Female	35,889	39,427	41,155	48,002	47,460	49,466	5.5%

Source: ESB, 2016

Transition rates remain worryingly low. Only about 65 per cent of pupils transition from Grade 7 to Grade 8. This means that 35 per cent of the Grade 7 school leavers cannot enter the secondary school system mainly due to the limited number of Grade 8 places. In 2010 and 2011, the difference between boys and girls transiting was high in favour of boys, but after the introduction of the 50:50 enrolment policy at Grades 8 and 10 the difference has decreased to values below two percentage points. Transition from G9 to G10 is low, and uneven across provinces. Roughly 45 per cent of Grade 9 students transit to Grade 10. Southern Province has a transition rate from Grade 9 to Grade 10 of only 31.9 per cent, the lowest in the country. This is because there are fewer places at Grade 10 in the province.

The gender parity index (GPI) for senior secondary education has dropped from 0.96 in 2009 to 0.86 in 2016, while improving to 0.95 at junior secondary. It is difficult to pinpoint the exact cause of the drop, especially since GRZ has implemented the re-entry policy and many other interventions aimed at keeping girls in school, including providing financial support for girls' attendance at secondary school. There is a need to investigate the possible causes of the decline in the GPI.

Repetition and dropout have been consistent over the past five years, tending to vary by gender, by province and by grade. Review of progress over time suggests that there has been little or no change over five years in the repetition rate, which climbed from 0.9 per cent to 1.2 per cent, and that there has been steady progress on reducing dropout (from 2 per cent to 1.1 per cent). The Grade 9 completion rate climbed steadily over the five years, but the Grade 12 completion rate declined quite significantly over the period.

Access and participation for children with special educational needs and disabilities are still a challenge for secondary education with only 20,092 participants in 2016. The ministry, in partnership and collaboration with stakeholders, especially faith-based organizations, has tried to provide education to such learners but this is not sufficient to meet the need. In order to plan well for the sub-sector, there is a need to investigate the total number of learners with special educational needs who are not participating or have been pushed out of school.

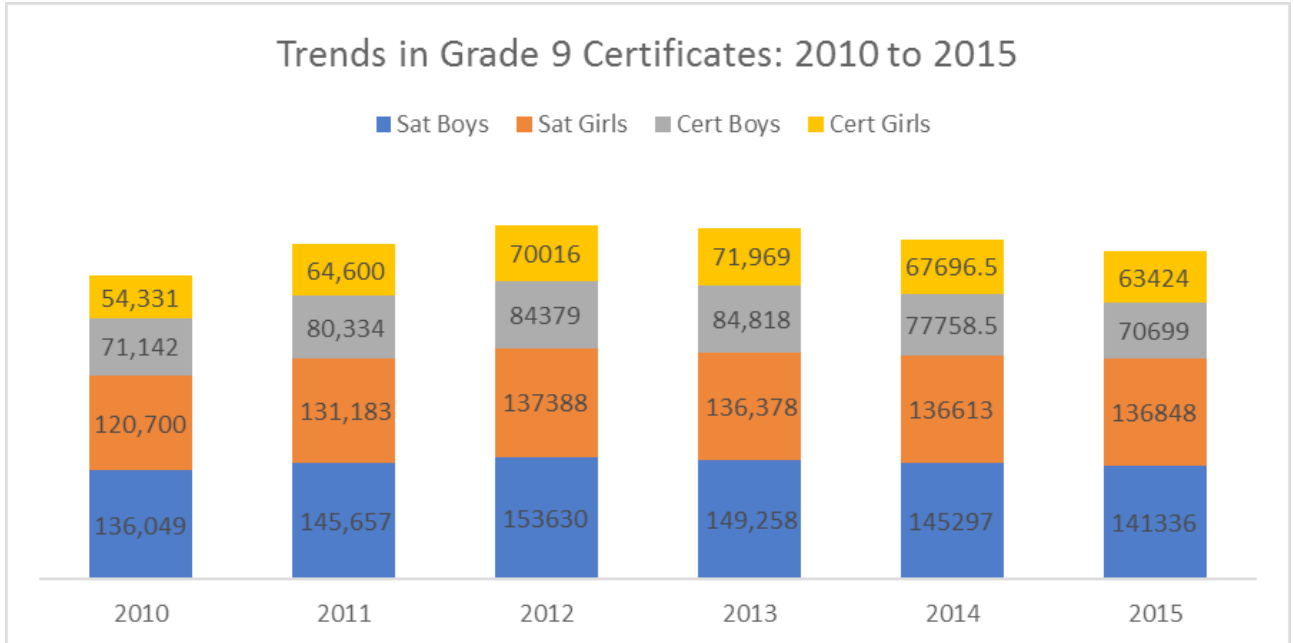
A significant number of children of secondary school age are not in school. It is likely that there is a higher number of secondary school-aged girls out of school than boys of the same age, and this difference increases when they get older. For upper secondary school ages, the gap becomes much wider. The gender gap has improved slightly over the years, but is still very visible. There is a higher risk for girls dropping out of school as compared to boys. Girls have approximately three to four times higher risk of dropping out than boys, showing that there is still a dire need for more efforts to keep girls in school. The Keeping Girls in School (KGS) initiative is a component of the Government of Zambia and World Bank funded Girls' Education and Women's Empowerment And Livelihoods (GEWEL) Project that aims to help address this.

The significant number of out-of-school youths with no skill and opportunities for continuing education remains a challenge. That there are provisions for open and distance learning, but the rate of participation and access to these centres is universally low.

Quality and relevance

The total number of candidates for public examinations at secondary level has increased, but there has been limited improvement in overall pass rates. The pass rates of the Grade 9 examinations are consistently low and did not rise above 60 per cent in the period 2010–2015. While there was a positive trend in performance in the period 2010–2014, 2015 showed a big drop, as highlighted in Figure 3.14.

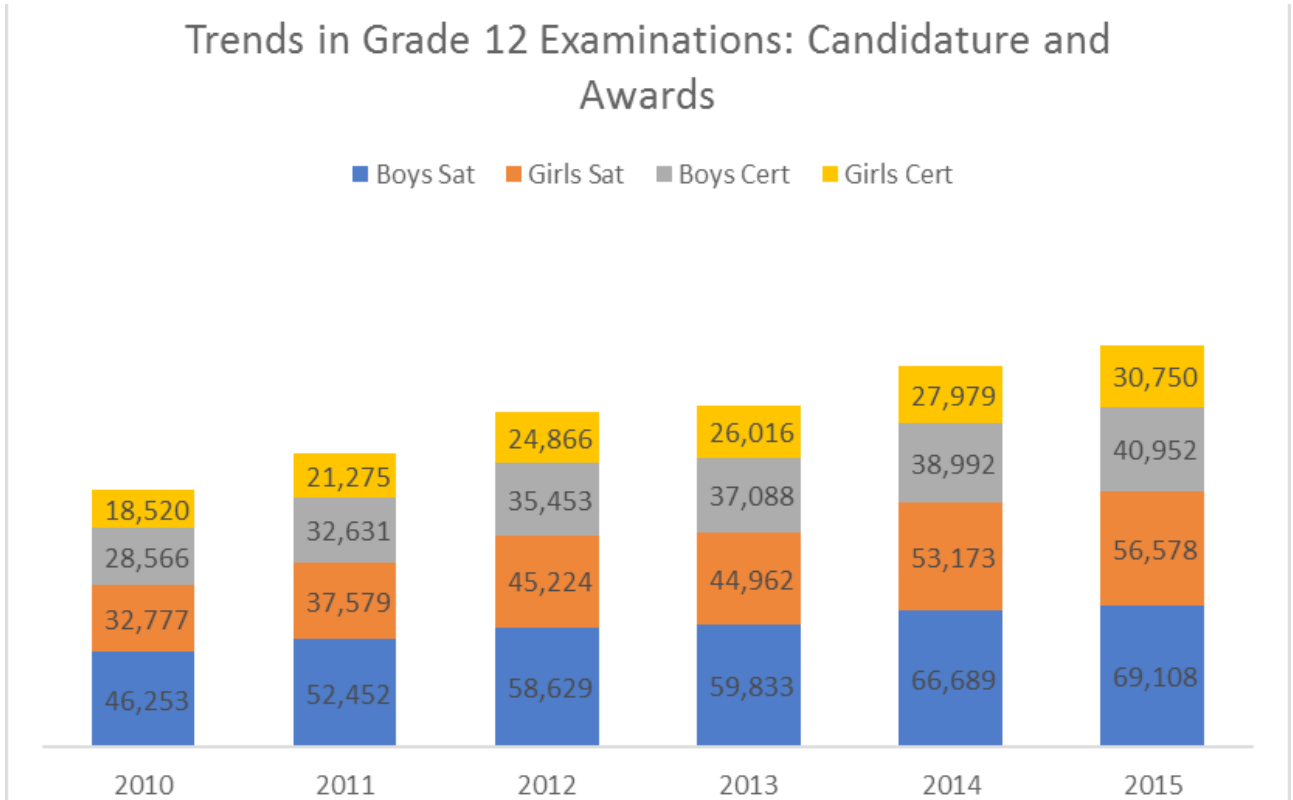
Figure 3.14. Number of pupils sitting for exams & obtaining JSC certificates by gender, 2010–2015



Source: ECZ Examination Statistics for 2010-2015, Zambia MoGE ESB for 2010–2015

The number of learners sitting for the Grade 12 examination increased substantially from 79,030 in 2010 to 125,686 in 2015. Figure 3.15 shows the numbers of boys and girls taking examinations and obtaining school certificates at the Grade 12 examination. For girls taking part in the examination, there is still a gender gap, but it is reducing as the data show a positive trend with 45 per cent of those taking the examination being girls in 2015, compared with 41 per cent in 2010.

Figure 3.15. Proportion of pupils passing the grade 12 exam by gender in 2010–2015



Source: Zambia MoGE: ECZ data

The learning assessments currently in place reveal that learning achievement is low in secondary school, at both junior and senior secondary school levels. The National Assessment Survey (NAS) and the annual national examinations taken in Grades 9 and 12 all show evidence that secondary school students are not achieving as expected. Except for English, boys consistently achieve higher pass rates than girls but the gap is narrowing. Furthermore, 64 per cent of senior secondary teachers are not adequately qualified to teach at this level, with only a minimal 36 per cent of teachers having the desired qualifications according to 2016 MoGE data.

Table 3.21. Teachers in secondary schools by academic and professional qualifications by gender

Teachers in secondary schools by Academic qualifications and sex				Teachers in secondary schools by professional qualifications and sex			
	Male	Female	Total		Male	Female	Total
Below Standard 6	1	0	1	Advanced Diploma	149	48	197
First degree	1 120	756	1 876	Certificate In Special Education	21	33	54
Form 2 / Grade 9	18	14	32	Diploma (Basic or Sec. Teacher's)	6987	5350	12337
Form 3 / Grade 10	5	11	16	ECE DIPLOMA	48	23	71
Form 4	173	137	310	Education Bachelor's Degree	3674	2624	6298
Form 5 / Grade 12	10 843	8 955	19 798	Master's Degree	137	83	220
GCE "A" Level	27	21	48	Untrained	5	5	10
Higher degree	57	43	100	Other Bachelor's Degree	226	102	328
Standard 6	6	10	16	Pre-School Teacher's Certificate	42	210	252
Not stated	44	38	82	Primary Teacher's Certificate	743	1289	2032
TOTAL	12 294	9 985	22 279	Special Education Degree	48	44	92
				Special Education Diploma	106	96	202
				NOT STATED	108	78	186
				TOTAL	12294	9985	22279
				Teacher Certificate	6%	13%	9%
				Diploma (Basic or Sec. Teacher's)	57%	54%	55%
				Total (Certificate + Diploma)	63%	66%	64%

Source: MoGE, ESB 2016

Teacher attrition also poses challenges to the secondary school sub-sector. As shown in Table 3.22, 5 per cent left the teaching profession in 2016 due to various reasons. The ministry has a challenge in replacing such teachers due to the limited number that it is allowed to employ on an annual basis. Moreover, attrition signals that the education system is wasteful as the sector has invested resources to train departing teachers. Some of the reasons for teacher attrition include, among others, contract expiry, death, resignation and retirement, as illustrated in Table 3.22, which shows the teacher attrition picture for 2016. There is a need for further interrogation on what constitutes 'Others' as a reason for leaving the education system, as this figure accounts for the majority of numbers.

Table 3.22. Teacher attrition in secondary schools by reason and gender 2016

	Male	Female	Total
All Reasons	626	508	1,134
Assigned to non-teaching duties	14	10	24
Contract expired	50	20	70
Death	39	37	76
Dismissed	23	9	32
Illness	5	3	8
Others	389	367	756
Resigned	82	59	141
Retired	24	3	27

Source: MoGE, ESB 2016

There are very substantial inter-provincial variations in PTRs. The pattern has been that there are far fewer teachers in rural schools compared to urban schools owing to inadequate number of social amenities in rural areas. In addition, not many teachers are willing to serve in rural areas because the rural/remote hardship allowances provided by government are not attractive enough. Further, there are far fewer teachers for science, mathematics and technology subjects with the minimum required qualifications to teach in secondary schools. There is also a mismatch between learning areas and supply of teachers, with fewer teachers being trained in mathematics, science and technology subjects. In tandem, there is an oversupply of teachers in social sciences.

Table 3.23. Number of teachers and PTRs in secondary schools 2011–2016

	2011	2012	2013	2014	2015	2016
No. of Teachers	12,947	18,639	19,615	22,418	22,799	22,279
PTR (Grades 8–12)	48:1	40:1	38:1	36:1	35:1	37:1

Source: Educational Statistical Bulletin, selected years

The secondary school curriculum was revised in in 2013 and the new curriculum implemented in 2014. The major changes in the revised secondary education curriculum were:

- Introduction of the two-tier curriculum system;
- Introduction of computer studies as subject (Grades 8–12);
- Introduction of social studies at the junior secondary level (Grades 8–9);
- Introduction of design and technology as a subject (Grade 8–12);
- Redefinition of the teaching content to clearly state knowledge, skills and values to be taught in each subject.

Access to teaching and learning material/equipment presents a continuing obstacle to quality learning in secondary schools. The NIF III had targets for textbook availability of two pupils per textbook for science and mathematics subjects. Textbook availability is shown in Table 3.24.

Table 3.24. Number of textbooks to number of secondary school students, 2016

	English	Life Skills	Maths	Total
National	2:7	1:9	1:6	5:7
<i>Provinces</i>				
Central	1:6	1:6	0	1:2
Copperbelt	0	0	3:7	3:5
Eastern	7:8	0	0	10:9
Luapula	1:3	0	0	3:7
Lusaka	2:5	0	1:9	1
Muchinga	1:4	3:8	1:3	7:6
North-western	1:7	0	0	2:7
Northern	1:5	1:3	0	2:3
Southern	1:4	0	1:9	4:9
Western	0	1:4	0	1:2

Source: ESB 2016

Lack of equipment is a key factor hindering the implementation of the two-tier system, especially in vocational subjects. Currently, the equipment is not sufficient to cater for the new vocational subjects in most secondary schools.

Special education secondary schools are seriously challenged by a lack of appropriate teaching and learning materials/equipment. In 2008, the ministry procured assorted supportive materials for children with special educational needs and almost all public special education institutions received some investment/resources. Nevertheless, with the passage of time, most of the supportive materials have degraded. In 2016, the ministry procured and distributed about 2,000 mattresses for learners with special educational needs. However, in terms of classroom teaching and learning materials, especially suitable textbooks, the ministry has much more to do for special education secondary schools and related units.

The MoGE's guidance and counselling service has limited effectiveness. The current situation in secondary schools is that many students are affected by psychosocial problems connected with family bereavements, disasters, conflicts between customary and modern values, diseases, drug abuse, prostitution and other anxiety-inducing situations. Many secondary school students are unaware of the purpose of schooling despite attending. Due to this ignorance, they are unable to make informed decisions that have profound influence on their lives. In helping students to cope with such challenges, the ministry established a Guidance and Counselling Unit in secondary schools. The unit is meant to counsel all learners affected by different psychosocial problems and guide them on their career choices. However, the unit is not able to provide the expected services to the learners because it is staffed by teachers who work there part-time. A significant proportion are not professionally qualified to do the work. In order to strengthen the Guidance and Counselling Unit in the secondary schools, the ministry has proposed to create positions in the new school structure for FT Guidance and Counselling Officers, which should be implemented in the ESSP.

The almost total absence of libraries in schools, and their marginalization in colleges, means that education tends to become equated with the contents of the textbook or with what the teacher expounds. Students have few resources to conduct independent or further study. They are unable to develop reading skills or to engage in self-development through reading. Ambitious plans to have students take charge of their own learning and to foster a desire to continue learning throughout life are not likely to be realized in the absence of libraries and sufficient reading materials.

Management and governance

Restructuring of the ministry should help to improve efficient management of the sub-sector. For many years it has been difficult to easily demonstrate targeted initiatives and programmes to improve secondary education because the current operational structure results in relevant functions being spread across different directorates. In most cases, the Directorate of Standards and Curriculum was held accountable for improving secondary school education but this was not satisfactory as this directorate's core function is quality assurance and control across the education sector as a whole. However, the ministry has observed this anomaly and a decision has been made to establish an operational secondary education structure to address the issues.

Key issues for secondary education

- (a) **Inadequate funding for non-salary activities** in the secondary school sub-sector. This is coupled with a lack of financial prudence, thereby compromising standards.
- (b) **Poor management** of the secondary education sub-sector due to the lack of a designated structure responsible for it at all levels.
- (c) In addition, **a good number of head teachers lack leadership** and management competences to manage secondary schools as evidenced by the education outcomes.
- (d) **Inadequate access to secondary education** due to limited available space in secondary schools. Need to finish schools that have not been completed and also consider upgrading some primary schools. The major problem is a shortage of classrooms. This leads to low transition rates at Grade 9 to 10.

- (e) **Repetition is high** (12 per cent) in Grade 9 when students are trying to do better in the examination to enter Grade 10. The main access-related challenge, however, is the shortage of places. Learners are 'pushed out' at two points of the system: first, one third of learners cannot progress to junior secondary due to a lack of spaces to absorb them, and second, half of those who do progress to junior secondary and succeed in completing the two years, cannot go on to senior secondary owing to a shortage of places.
- (f) Due to **schools being located long distances from homes**, eligible secondary school learners are unable to access secondary school.
- (g) **Limited secondary schools available for children with special educational needs.** For instance, Central Province does not have any special school providing secondary school education. Lusaka, despite its significant population, only has one special education secondary school.
- (h) **Dilapidated basic infrastructure**, inadequate teaching and learning materials with poorly equipped classrooms especially for practical/and specialized subjects.
- (i) **Poor retention of learners who are at high risk of school dropout** (especially girls) due to a number of issues such as: pregnancy, early marriages, unfriendly school environments (not gender sensitive and/or lacking adequate sanitary provisions), among others.
- (j) **Social and economic challenges** (such as high poverty levels particularly in rural areas and to orphans and vulnerable children) which cause serious financial burdens, with a number of parents failing to pay school fees (regardless of how low these may be), resulting in some children lacking the opportunity to continue with secondary education.
- (k) **Inadequate specialized teaching and support materials** for children with special educational needs, e.g., physiotherapy, hearing aids, Braille paper, wheelchairs, mattresses, vehicles, etc.
- (l) **Negative impact of HIV/AIDS**, such as the loss of secondary school teachers, and loss of parents/ guardians resulting in child-headed homes, causing, in turn, poor performance and/or dropout.
- (m) **Lack of a clear structure for guidance and counselling** for the secondary school sub-sector as officers are only attached to the office for administrative convenience.
- (n) **Wealth and location drive participation rates in secondary school:** 14 per cent of students from low-income families attend, while 69 per cent from the richest families attend; urban gross enrolment ratio is 58 per cent, rural 27 per cent.
- (o) **Weak management of the scholarships and bursary schemes** for vulnerable learners.
- (p) **Understaffing in terms of inadequate supply of qualified teachers**, especially in specialized subject areas such as mathematics, science and practical subjects.
- (q) **Implementation of the revised curriculum** in relation to teaching and learning materials, teacher competences, and particularly in terms of generating comprehension of the two-tier system among those responsible for implementation affects the quality of education.
- (r) There are **low levels of learning achievement** at both junior and senior secondary level, as can be seen from the number of learners achieving desirable levels in the Grade 9 NAS and obtaining full certificates at Grade 12.
- (s) **Poor delivery and distribution of procured teaching and learning materials** and equipment for secondary school sub-sector, e.g. textbooks for all subjects and learning areas.

- (t) The **total absence of libraries** in secondary schools means that the learners have limited resources for learning. Where libraries are available, the materials are outdated or not relevant and they are not networked.
- (u) **Employment of untrained and unqualified teachers** in certain specific subject areas (such as sciences, ICT and practical subjects) and inadequate motivation and incentives for teachers.
- (v) **Inadequate motivation and incentives for teachers.**

3.14 ALTERNATIVE MODES OF EDUCATION PROVISION (AMEP)²⁰

According to the Central Statistical Office's 2013 report, the country's population was estimated at 15.7 million. Of the total population, 52.5% were under 18 years of age with more than 40% of the total population representing youths (between ages 15 and 24). At the same time, this cohort of people constitute 30% of the total labour force of which more than 15% of all youths were actually unemployed. This means that, of the unemployed population of 459,132, almost 60% were young people aged 15–24.

The MoGE implements AMEP/YALE programmes through the four modes of education delivery: (i) Open Learning, (ii) Distance Learning, (iii) Schools for Continuing Education, and (iv) Adult Literacy Education. Table 3.25 summarizes the size of the sub-sector in 2016 across different modes. YALE is managed and coordinated by the MoGE's Directorate of Open and Distance Education (DoDE) and through its structures at national, provincial and district levels.

Table 3.25. AMEP centres and enrolment 2016

Programme	Centres	Enrolment
Open Learning Classes	1,074	91,580
Correctional Centres	34	1,913
Skills Development	13	802
Transit	N/A	4,500

Source: ESA

Quality and relevance

Quality improvements made to AMEP by the MoGE include a range of interventions such as: (i) a well-developed adult literacy curriculum, (ii) improved training of serving teachers in adult literacy techniques and methodologies for adult literacy classes, (iii) development of adult literacy teaching and learning materials (Primers), (iv) continued Training of Trainers (ToT), (v) development of Adult Literacy Training Manual, and (vi) increased establishment of Community Learning Centres (CLC) to empower adult literacy learners with ICT and vocational skills in tailoring and bricklaying.

Access and equity

To promote equity in the provision of AMEP, the MoGE has focused on establishing adult literacy classes in the existing government schools in rural, remote and urban areas. There is provision of both basic and functional literacy through the two-tier education system by providing skills training courses in topics such as tailoring and bricklaying to encourage both men and women to enrol for literacy classes. Furthermore, adult literacy classes are established in correctional facilities for inmates to cater for marginalized groups in society, among others. There are education centres in 34 correctional facilities with 1,913 learners across the country who learn through the face-to-face teaching modes.

²⁰ Also referred to as Youth and Adult Learning Education (YALE)

Efficiency and management

At central level, AMEP is a relatively small sub-sector. In 2015, the budget amounted to just 0.02 per cent of the total budget, and by November 2015 little of this allocated amount had been released and spent, showing the challenges presented by limited budget releases to the sub-sector. Despite a small budget allocation, the MoGE has aimed to maximize outputs in terms of increased activities in the various delivery modes mentioned above.

Continuing education

Continuing education has three components: opening learning, distance education and skills development.

Open learning

The Open Learning unit coordinates and promotes the provision of education to out-of-school youths and adults through face-to-face modes of education delivery in order to increase equitable access to education and skills training in schools for continuing education. It also provides flexible education opportunities to every learner through effective implementation of open learning classes, evening classes, GCE classes/examinations, education for correctional facilities' inmates, transit classes and skills training programmes in aforementioned Schools for Continuing Education.

Further, the Open Learning Unit has reached out to 4,500 out-of-school children, youths and adults through a transit schools programme which uses a multi-grade teaching methodology.

The programme is being piloted in Northern and Eastern Provinces with the objective of providing learning opportunities to those learners who have dropped out at various levels of education from Grades 2–6. The Unit has 91,580 learners in 1,074 Open Learning Centres.

Distance learning

Zambia College Of Distance Education (ZACODE) is the main provider of distance secondary education and is the only public institution in the country offering secondary education through distance learning. ZACODE has been providing secondary education open and distance learning since 1965. Currently, the college is offering distance learning to 1,497 learners in 41 centres, using printed materials, including study kits in some subjects for GCE learners. The college has embraced new technologies in order to improve access to quality secondary education for out-of-school children, youths and adults.

Skills development

The MoGE offers skills training to out-of-school youths and adults through the Schools for Continuing Education programme in all the provinces except Lusaka and Muchinga. Schools for Continuing Education offer academic and vocational courses in line with the two-tier education system of providing academic education and skills training, which equip citizens with knowledge and skills required for improved productivity. The 13 Schools for Continuing Education have 8,431 learners, with 7,629 enrolled in academic programmes and 802 enrolled in skills training programmes such as carpentry, metal fabrication, food production, bricklaying and plastering.

Educational Broadcasting Services

Educational Broadcasting Services (EBS) is one of the three main units under the DoDE. The unit comprises two main sections, namely Educational Radio Services (ERS) and Educational Television Services (ETVS). Since EBS was established in the 1960s (radio in 1965, television and the audio-visual aids service in 1967), the main aim was to create an integrated system that would enhance regular classroom learning, while developing possibilities for lifelong learning. Hence, programmes and materials were directed towards enriching and supplementing the educational experiences of those in the formal system. Similarly, this system was intended to enhance and supplement learning for those enrolled in distance education programmes and in open learning environments.

EBS has continued operating under its two units, ERS and ETS (ETVS) in Lusaka and Kitwe respectively, producing visual and audio educational programmes using multimedia platforms. In the past EBS collaborated with ZNBC to present educational programmes, an undertaking which became very costly for the MoGE. The MoGE has since opened its own radio station, which is being managed by EBS.

Key issues for AMEP

The current key issues for AMEP are summarized below, while additional details are also presented in the ESA.

- (a) **It is unclear which of AMEP's programmes are cost-effective** and evaluations of each programme should be conducted to determine this.
- (b) **An AMEP management structure that is not responsive to its mandate** (clarification of roles). For example, skills development is still being carried out by YALE despite the separation of ministries.
- (c) **Inadequate funding to run AMEP institutions in terms of operations**, and provision of physical facilities such as infrastructure and equipment.
- (d) **Weak documentation, record management, learner support** (poorly stocked library) and quality assurance systems. Limited evaluations of the programmes in the sub-sector, which hinders assessment of effectiveness and efficacy. Limited internet infrastructure and facilities placing enormous constraints on efforts to provide modern ways of teaching and learning, coupled with high cost of information and communications technology (ICT) services.
- (e) **Inadequate learning centres for the provision of this mode** of education to most learners.
- (f) **Lack of transmission equipment (radio and television)** and obsolete multimedia production equipment (computers, printers, scanners, photocopying machines).
- (g) **Inadequate logistics limiting the Colleges' capacity to deliver** teaching and learning materials and to monitor learning centre activities.
- (h) **Weak coordination between the MoGE and the Ministry of Community Development and Social Services (MCDSS)**. While the MoGE controls the funds, the MCDSS owns some of the facilities for AMEP.
- (i) **Limited number of qualified trainers** coupled with inadequate teaching and learning materials.
- (j) **Lack of management guidance and structure.**
- (k) **Student numbers are too low and costs too high** with unsustainable community motivation.
- (l) **Inadequate links with formal school system and the industry.**

3.15 TEACHER EDUCATION, MANAGEMENT AND SPECIALIZED SERVICES

Access and equity

Pre-service teacher education is provided through 12 public institutions and as well as several private institutions. The public colleges have more capacity than private colleges in terms of ability to train more teachers. Currently it is estimated that the total enrolment in both public and private colleges is slightly above 30,000 students. At present, there are six public universities and 17 private universities training teachers in various subject areas.²¹

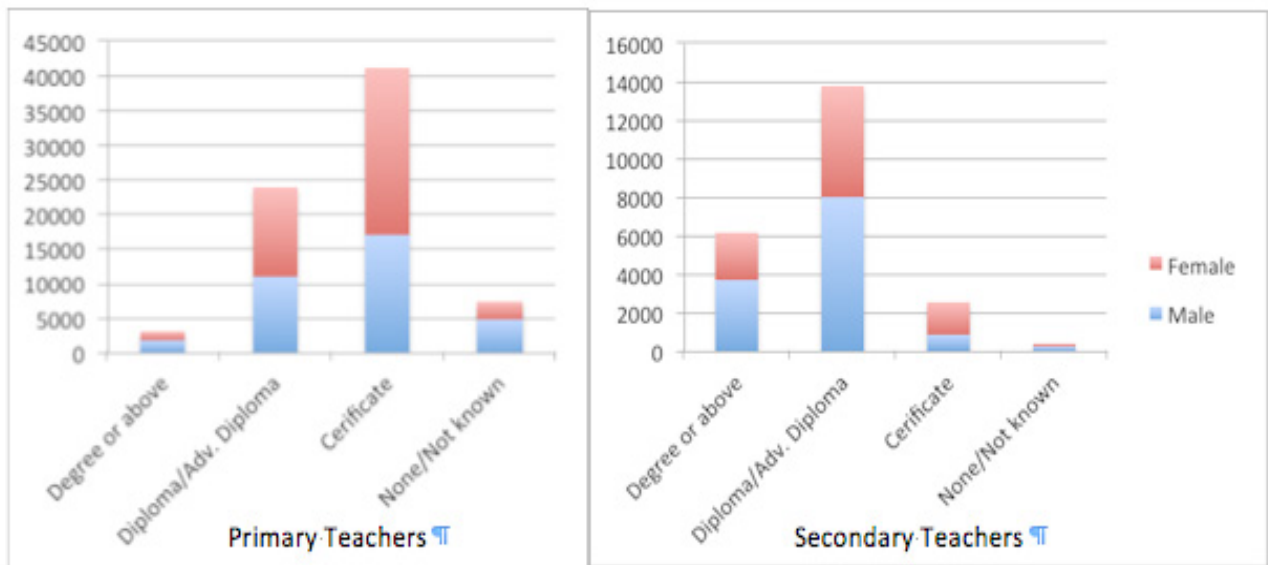
²¹UNZA AUCE, 2017.

Quality and relevance

Progress has been made in improving the qualifications of teachers. As of 2016, over 96 per cent of primary teachers (of whom 55 per cent are female), and 98 per cent of junior secondary teachers (44 per cent female) held the minimum academic qualification of Form V/Grade 12. Approximately 30 per cent of senior secondary teachers, however, hold a degree, of whom 39 per cent are female. Another challenge with the present system is that there is an inadequate number of teachers, particularly to teach children with special educational needs, and Mathematics and Science.

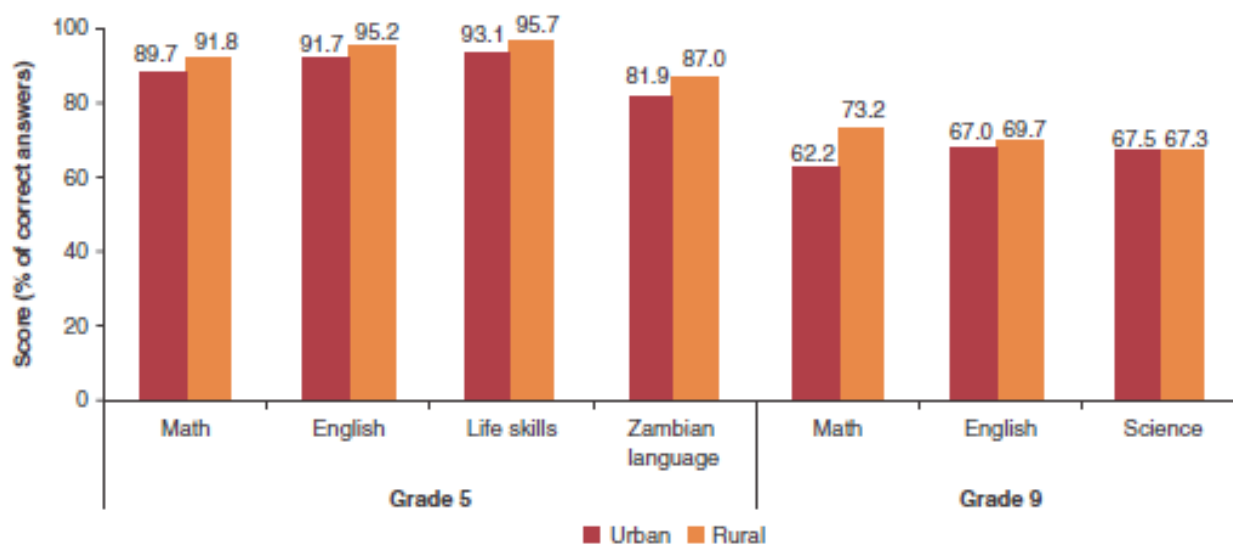
Professional qualifications lag behind, although there has been progress in this respect (Figure 3.16). Just 5 per cent of primary school teachers and 31 per cent of secondary school teachers hold a degree or above (including non-teaching degrees as well) while 34 per cent of primary and 55 per cent of secondary school teachers hold a diploma or advanced diploma. The largest group of primary school teachers (45 per cent) are holders of the Primary Teacher's Certificate, as are 9 per cent of secondary school teachers.

Figure 3.16. Teacher professional qualifications by gender



Source: 2015 ESB

There are significant issues related to teacher competence. The QSDS 2015 reveals that Grade 9 teachers scored 70 per cent on the same tests given to students across all subjects. Grade 5 teachers performed somewhat better, achieving almost 90 per cent in all subjects. It is clear that teachers require deeper subject knowledge (especially at secondary level), in addition to pedagogical skills development support (a minority of primary and secondary teachers in the same survey were found to set homework or summarize class lessons).

Figure 3.17. Teacher assessment in Grades 5 and 9

Source: PETS/QSDS

The shortage of qualified teachers is most acute in mathematics and sciences. Generally, there are more teachers of social sciences in the school system, with the more acute shortage in relation to natural sciences (i.e., maths and science). Data confirm that, in 2016, colleges and universities trained more teachers in social sciences than in the natural sciences, and there is high attrition rate in science- and maths-related subjects which has remained a significant problem since 2011.

A significant number of teachers at community level, including ‘volunteers’, are untrained and unqualified. According to the 2016 ESB for the MoGE, there were 7,815 community school teachers and 6,367 mentors in Interactive Radio Instruction (IRI) Centres. The majority of teachers in these schools and centres were not qualified and require tailor-made capacity building programmes.

Only 183 graduate teachers specializing in mathematics were available to fulfil a requirement for 1,709 positions, while only 607 graduate science teachers were available – way short of the 2,509 teachers required. Similarly, despite the popularity of social science as a subject area, only 885 teachers with degree qualifications in social sciences were available, compared to a requirement for 6,508. The 120 social science graduates produced annually by Zambian universities is far from meeting the national demand for social science teachers at secondary school level.²²

Significant progress was made in strengthening the pre-service teacher education system in the years 2011–2016. Of particular note is the curriculum revision process, which also incorporates strengthening the pedagogical skills of teachers. This has the potential to place pre-service teacher education on a trajectory that will positively contribute to the operationalization of the revised curriculum. Other significant achievements include capacity development of science and maths teachers and training of teachers in the use of mobile labs, and ongoing nationwide school-based training.

Among the sustainable strategies that the MoGE has put in place to ensure teacher education in response to the needs of the revised school curriculum are: a revision of the teacher education curriculum to ensure that the teachers as they graduate are able to handle the two pathways in terms of teaching as well as handling examinations and practicals/experiments; and training existing teachers in handling new subjects as well as the vocational pathway.

The MoGE has taken a number of measures to enhance the capacity of serving teachers through the CPD activities under the SPRINT. There are two main categories of CPD, namely, School-Based CPD and College-Based CPD. The Directorate of Teacher Education and Specialized Services (TESS) has collaborated with many stakeholders in implementing CPD programmes among teachers and

²² NIF III, 2011

lecturers. Organizations such as public and private teacher training colleges, public and private universities, and NGOs, also provide teacher professional development programmes. Teacher Resource Centres represent another avenue for providing professional development programmes.

The MoGE has also introduced an education leadership and management training programme to strengthen effective school management. This initiative is now also supported through the provision of simple kits and tools.

Efficiency and management

The teacher education sub-sector is enormously complex, with a range of different providers, including public and private universities and public and private teachers' colleges. In the decentralization strategy, this function is planned to be primarily overseen and implemented at a central level to ensure consistency of standards and efficiency in monitoring and management.

Student:lecturer ratios are low in colleges of education. According to current data there are fewer than seven students per academic staff member. This estimate does not take into account that some of the staff are part-time, and some are also teaching courses outside of teacher education. A more systematic analysis of HR capacity in the colleges that can enable calculation of full-time equivalent (FTE) is required. There is significant variation between colleges, with private colleges generally having higher ratios.

Teacher recruitment and supply

While the supply of teachers has improved significantly, there are still huge systemic challenges in terms of placement and effective utilization. These challenges are felt in the way teachers are recruited, deployed and retained, and locally at the school level, in terms of ensuring that teachers are present and are adequately prepared to teach.

On the basis of current staffing formulas, the system is understaffed at all levels, particularly in secondary education. However, the MoGE has managed to increase teacher numbers such that the PTRs at both primary and secondary levels have reduced steadily from a high in 2011, although the rate of progress slowed after 2014. These ratios are still substantially higher than staffing policies call for, but the progress indicates the level of commitment of the government. However, the PTR as of December 2016 at primary school level had increased from 42.7 in 2015 to 43.3 in 2016 while at secondary school level, it had increased from 35.2 in 2015 to 36.9 in 2016. The recent PTR increases could be attributed to higher teacher attrition or failure to deploy an adequate number of teachers.

Teacher deployment and utilization

Zambia's teacher recruitment system predominantly uses the EMIS as the main criteria for teacher allocation. Once the Cabinet Office gives the authority to employ a particular number of teachers, the MoGE determines the allocation of teachers through a computer-generated model. Thus, based on the number of teachers to be recruited and the desired PTR by district, a model is generated which calculates the district allocation of teachers. Thereafter, the personnel from HRA directorate then deploy teachers to the schools.

Zambia uses a location-specific recruitment and planned deployment system, allowing teachers a degree of choice of location. The recruitment system is seen as transparent since the available posts annually are advertised nationally in newspapers, on radio and television, with an indication of the number of posts available in each district. Candidates are allowed to apply directly to the district in which they wish to work, but not to the specific school. This recruitment/deployment approach enables recruitment to most of the available posts, while ensuring a high level of localized recruitment of teachers. However, it has resulted in an uneven distribution of the best-qualified teachers. The main challenge to recruitment arises from the limited number of new teacher appointments sanctioned by the Cabinet Office. For the past three years the number sanctioned to be recruited was fewer than the number leaving the profession.

There are a number of challenges to teacher deployment, including a reluctance to work in hardship areas, insufficient housing provision and medical requirements of teachers with health issues, among others. Moreover, despite a very systematic deployment system, there are still some challenges in that some people who do not qualify based on the criteria set are still deployed to schools. There are also significant problems relating to teachers immediately applying for relocation to urban areas or even being ‘unofficially’ re-deployed from rural areas to urban schools. This means that substantial numbers of teachers are not teaching where they are officially assigned and paid, leading to substantial ‘payroll mismatch’.

An indicator of the variation in the PTR between schools throughout the country is the ‘degree of randomness’ in the PTR.²³ On the basis of 2017 EMIS data, the correlation between teachers and pupils in non-private primary schools is .79 and the degree of randomness is .38; for non-private secondary schools the correlation between teachers and pupils is .69 and the degree of randomness is .52.

The efficiency of teacher utilization remains low. The QSDS study suggests that in the schools covered by the survey, on average 52 per cent of teachers were actually in their classrooms teaching, while a substantial proportion were either ‘absent’ (18 per cent) or ‘not teaching or not in their classrooms’ (20 per cent). Further investigation of this plus the reasons behind the high attrition rates should be examined, given that teachers are comparatively well paid compared with other countries, receiving 6.7 times GDP per capita (recommended is three to five times GDP per capita).

Specialized services

The Guidance and Counselling unit is situated organizationally under the Directorate of Teacher Education and Specialized Services. Guidance and counselling services are very important aspects in terms of learners’ education and ability to make good life decisions. They are especially critical for learners who are experiencing socio-economic challenges (poverty, sickness, hunger, etc.), are maladjusted (emotional/ cognitive issues, etc.) and personal issues (deviance, coping, etc.) in both rural and urban areas.

If these issues are not addressed, learning is affected. In addition, poor performance is more likely, leading to repetition of grades – which from an efficiency point of view is undesirable (especially as repetition is already a serious challenge in Zambia, particularly in primary schools).

Because of this, the MoGE attaches great importance to the provision of guidance and counselling services in learning institutions. Currently, there are administrative structures for guidance and counselling services at the national and provincial levels. With these structures in place, policy frameworks are being formulated. With technical support from CPs, the ministry has developed and produced a number of guidance and counselling materials for teachers and learners across the school system.

Library services. Most secondary schools have no libraries, and very few have trained librarians. In the recent past, libraries in colleges of education and schools were stocked with some books although most of them were inappropriate and unorganized. Most public primary schools do not have libraries but some public primary schools have benefited from partnerships which establish them. In the last ten years, Zambia Library Services (ZLS) has been supported technically and materially by external partners.

With support from additional partners, reading books were procured and distributed to districts for classroom libraries in Muchinga, Eastern, Luapula, Northern and Western Provinces. However, most of these community and primary school libraries are managed by unqualified volunteers. In order to

²³ This is based on the correlation between the numbers of pupils and teachers across all the non-private schools. The square of the correlation is called the coefficient of determination (R^2), which is the amount of variance explained by the correlation (or regression, but with only two variables). The ‘degree of randomness’ is $1-R^2$, which represents the degree to which teacher deployment to each school is not determined by the number of pupils in that school, but by other, seemingly random, factors. In a perfect world, the correlation would be 1 because every school would have the same pupil:teacher ratio, in which case the degree of randomness would be 0.

ensure good utilization of the books by schools, provincial ‘trainers of trainers’ were trained in the establishment and management of classroom libraries.

Science, mathematics and technology. The ministry has strengthened and transformed the National Science Centre (NSC) in order to improve service delivery in science, mathematics and technology education. The budgetary allocation to the centre has been increased and centre has been upgraded to a directorate status. CPs have also helped significantly in terms of technical and financial support to the centre, which has seen the construction of new infrastructure. Increasingly, the centre has continued producing teaching and learning materials and training of STEM teachers. By 2017 over 1,700 mobile science laboratories had been produced and distributed to over 340 secondary schools. In CPD, over 600 teachers and lecturers from primary, secondary and colleges of education have received in-service training on the use of these materials.

Key issues for teacher education, management and specialized services

- (a) **Managing supply and demand:** Colleges are unable to produce secondary school teachers in the numbers needed by the schools due to rapid population growth. In addition, colleges and universities are producing teachers in social sciences rather than in subjects where there is a lack of teachers (e.g., STEM and vocational subjects).
- (b) **Enhancing deployment and transfer procedures:** Qualified teachers are oversupplied to urban areas, while rural schools are understaffed. Many rurally deployed teachers are teaching in urban schools without authorization and this leads to payroll anomalies/understaffing. The MoGE needs to develop a workforce plan and procedures to embed the application of agreed and transparent criteria in deciding teacher deployment and transfer requests and in order to minimize payroll mismatches.
- (c) **Understanding and addressing reasons for teacher attrition,** as this is a significant drain on resources, particularly after valuable resources have been invested in teacher training and recruitment. One cause may be inadequate policies for remuneration and career opportunities – currently, career pathways for teachers to advance within the education sector are limited, while remuneration packages are perceived to be extremely low, resulting in high rates of attrition and teachers resorting to other sources of income (in turn leading to absenteeism, etc.).
- (d) **Understanding why teachers are not in classrooms teaching** when they should be. There are high rates of teacher absenteeism both from school and from the classroom when they are in school. A study of teacher motivation is needed, combined with measures to improve teacher supervision.
- (e) **Enhancing the institutions that produce teachers.** Currently, teacher training institutions face challenges in producing a cohort of suitably qualified teachers feeding into the education sector. These challenges include: inadequate facilities; training approaches which reinforce inflexible, and sometimes outdated, pedagogical approaches; mismatch of teaching trainers with backgrounds in primary education training students in secondary education; and many others.
- (f) **Need to increase performance of the education workforce** through developing national professional standards for teachers and leaders. Most junior secondary classes (Grades 8 and 9) in primary schools are taught by unqualified subject teachers. In many cases, the teaching in these grades is conducted by teachers who have been trained for primary school level. Individuals in positions of leadership lack the leadership and managerial skills needed to supervise teachers effectively. This has resulted in many educational institutions failing to perform to the expected standard.
- (g) **There is also evidence that secondary school teachers do not have sufficient subject knowledge** and all teachers require further pedagogical development, including through

CPD. Current professional development programmes are uncoordinated, unsustainable and do not adequately address the specific needs of teachers. In particular, there is a need to strengthen the capacity (infrastructure, equipment and apparatus) for the National Science Centre to provide CPD in science, technology, engineering and mathematics and (STEM) and the production of STEM materials. There is also weak exploitation of the potential of ICT in implement CPD at scale. Though government policy encourages CPD programmes using ICT, in reality, there remain many challenges in terms of access, content and ICT skills.

- (h) **There is a challenge in providing adequate supervision to students on teaching practice.** Students in teaching practice (school experience) are not closely supervised by their lecturers in order to mentor and coach them on their professional work. Provision and strengthening of quality assurance services at centres as close as possible to points of service delivery. Education standards officers are faced with challenges such as lack of effective alternative options to traditional physical monitoring strategies;
- (i) **Overall, there is need to streamline teacher education provision** taking into account the current national development agenda that has made education and skills development a critical pillar of national development. This makes it imperative that the MoGE meets the developmental aspirations of the country, which means placing emphasis on the development of science, mathematics and technology. In the same vein, it is crucially important to also focus on the holistic development of learners so that their affective, cognitive and psychomotor skills are developed at the same time. This would in turn optimize the benefits they derive from the education system for personal, national and global development needs.
- (j) **Numbers graduating from teachers' colleges and universities are unlikely to be sufficient to meet demand in the medium term.**
- (k) **Zambia still does not have enough science and mathematics teachers.** The challenge is that improvements in the supply of teachers are skewed in favour of non-technical subjects. The introduction of the vocational pathway under the 2014 revised curriculum has widened the challenge of improving the supply of teachers for technical subjects that now include information and communications technology (ICT), plastering, carpentry, joinery, bricklaying, metal fabrication and electrical engineering in addition to Design and Hospitality. Given that these subjects are new and colleges have just begun courses, training sufficient numbers of teachers in these subjects is likely to be a major challenge.
- (l) **Many ECE teachers are untrained and, of those trained, most have not received adequate training for the early childhood level.** The majority of primary teachers in the past may not have focused on early grade reading.
- (m) **Primary colleges of education and universities have failed to address the pedagogy of teaching initial literacy and numeracy** to school beginners. Most colleges of education and universities do not have staff members trained to help student teachers learn how to teach young children initial literacy and numeracy.
- (n) **Challenges in the colleges of education are:** Staff with inadequate or unsuitable educational and professional qualifications; Shortage of educational resources of all kinds; and constraints in providing adequate supervision to students.
- (o) **The annual average output from teacher colleges and universities does not appear to meet the current needs** for teachers at different levels within the education system. In addition, supply has not been matched with specific demand in areas of specialization.

3.16 HIGHER EDUCATION AND TEVET

Higher (or tertiary) education is provided after secondary education, leading to a qualification of Certificate, Diploma, Bachelor's Degree, Master's Degree or Doctorate Degree. Higher education is provided at colleges, universities, or similar education and skills training institutions. The sector includes both public and private universities as well as TEVET colleges which are registered under the recently established HEA and TEVETA respectively. The MoHE is tasked with overseeing higher education (comprising both university education and TEVET) and science, technology and innovation (STI).

There is a varied array of public and private higher education and skills training institutions in Zambia, designed to meet the special needs of various sectors of the national economy. These institutions comprise universities, TEVET institutions, colleges of education and other similar institutions. The institutions provide learning through either the academic or skills pathway.

The academic pathway consists of universities, colleges of education and other similar institutions offering programmes leading to qualifications from Level 6 (Diploma) to Level 10 (Doctorate) on the National Qualifications Framework. Conversely, the skills training pathway consists of trades training institutes, institutes of technology and colleges offering from Level 3 Certificate (Trade Test) to Level 6 (Diploma).

Higher education provision had, over the decades, become increasingly fragmented and uncoordinated owing to the absence of an integrated national regulatory framework, and this need has become more pronounced with the emergence of private university higher education providers, especially since 1999. The need for this framework led to the repeal and replacement of the University Act of 1999 with the Higher Education Act No. 4 of 2013, which provided for the establishment of the Higher Education Authority (HEA), whose mandate it is to ensure quality in higher education provision. Specific functions of the HEA include setting standards, providing quality assurance and advisory and regulatory services to all higher education institutions registered in Zambia.

Access to university education

With only an estimated 229 students per 100,000 inhabitants, Zambia ranks among the African countries with the lowest rates of participation in higher education. To address this challenge the Government of Zambia initiated private sector involvement in tertiary education. This has led to the emergence of 61 private universities alongside six public universities. As a result of the expansion, enrolment at university rose from 20,000 students in 2010 to approximately 92,000 students in 2017. Despite the increase in private sector participation in university education, the rate of absorption remains low and it is estimated to be at 12 per cent for both public and private universities.

Among the key determinants of access to tertiary education are availability of infrastructure; availability of lecturers and instructors; affordability; geographical location; performance in key subjects; career information; and guidance and counselling.

For some time, university education in Zambia was not receiving the necessary attention. Thus, from 1966 to 1987, there was only one public university – the University of Zambia – until the Copperbelt University was established in 1987. Under *Educating Our Future*, education provision was liberalized, and this allowed the private sector and other stakeholders to participate in higher education.

In 2017, there were six public universities and 61 private universities with a total enrolment of 91,969 learners. Public universities account for 54 per cent of the total enrolments in university education. These universities provide training in science and technically oriented courses, which drive the key areas for economic development accounts.

Figure 3.18. University enrolments for public and private institutions, by sex

Source: 2016/17 MOHE Annual Higher Education Census

Most private universities have fallen below the minimum required standards. The mushrooming of private universities in recent years saw the registration of over 100 universities prior to the establishment and operationalization of the HEA in 2015. The Authority has, however developed guidelines for registration as well as accreditation criteria for both programmes and lecturers in universities. With the commencement of the accreditation of learning programmes in 2017 and the strengthening of the policy and legal framework through the development of the Higher Education Policy and the amendment of the Higher Education Act, the sector will see strengthened quality assurance going forward.

Despite the increase in enrolment, the education opportunities beyond secondary school remain limited for young people who cannot access tertiary education due either to the lack of places or inadequate bursary schemes. The competition for places is intense, although in principle students are selected on the basis of ability. The bursary scheme, though desirable, is inadequate and unsustainable. Hence, the focus in this sub-sector is on infrastructure development and the introduction of the loans scheme, which is seen to be a much more sustainable option.

The Zambia Qualifications Authority was established in 2011 to register and accredit qualifications. In addition, the Higher Education Authority, whose mandate was advisory, regulatory, policy formulation, quality assurance, and governance was established in 2013. Furthermore, the government established the Higher Education Loans and Scholarships Board in 2016 as a sustainable financing mechanism for learners in higher education.

Quality and relevance

Zambian universities perform modestly compared with other parts of the SADC region. Some of the major challenges that universities face include the lack of curriculum responsiveness and relevance to individual, community and national needs. Universities are also experiencing high student:lecturer ratios (SLR). For instance, in 2016 UNZA had a student population of 11,473 and 315 academic staff (SLR: 36.4) and MU had 1,311 students and 58 lecturers (SLR: 22.6).

Quality assurance in university education has been a challenge due to a number of factors. These include weak legal framework for establishment of institutions; poor linkages among higher education institutions and between these institutions and industry; inappropriate curriculum, especially in the areas of science, technology and innovation; inadequate qualifications of academic staff; insufficient training materials and equipment; and poor library facilities. Further, there is inadequate funding to support research and development. These constraints have contributed to poor teaching and training, low research output, and uncoordinated consultancy and community services, which are core functions of higher education institutions.

As a quality enhancement measure, the government established the Zambia Qualifications Authority (ZAQA) to register, accredit and validate qualifications, and the Higher Education Authority (HEA) to register higher education institutions and accredit learning programmes. The responsibility to assure the quality of university education delivery lies with both the HEA and ZAQA, which are mandated to undertake periodic monitoring visits to both public and private higher education institutions, using standardized instruments. This has resulted in validation of a total of 897 qualifications, registration of 61 higher education institutions and accreditation of 55 learning programmes by the end of 2017.

Efficiency and effectiveness

In Zambia, the efficiency and effectiveness of university education is measured by the performance in examinations, which determines how many candidates have graduated or proceeded to the next level. However, efficiency and effectiveness in the provision of education must go beyond examinations to include all aspects that play a critical role in ensuring that education provided to learners is of good quality.

However, institutions have faced a number of challenges, including non-adherence to management systems; inadequate monitoring and evaluation systems and tools; and inappropriate structures to provide oversight. This has affected the efficient running of the universities and has resulted in reduced effectiveness in these institutions.

The strengthening of the oversight institutions will be necessary to improve both efficiency and effectiveness in universities. Improved internal systems and well-established management information systems will also help to measure performance and improve monitoring and evaluation of this performance.

Equity in university education

In 2014, gender parity in university education was 0.75, with less than 25 per cent of enrolled students in these universities being female. However, within some tertiary institutions, such as the University of Zambia, great improvements have been made with increased female participation, albeit in commercially oriented fields such as Humanities, Business and Education. Female participation is much lower in science, technology, engineering and mathematics (STEM) programmes at higher education level.

Factors that negatively affect female participation in university education range from cultural to socio-economic. They include distance; lack of safety, leading to sexual harassment; lack of sanitary facilities; domestic responsibilities; bias to pay for boys' education; early pregnancies and marriages; and gender stereotyping of programmes. These factors have exacerbated gender imbalance in accessing and participating in higher education.

Interventions targeted at eliminating gender disparities include the promotion of female education, particularly in science, technology, engineering and mathematics programmes through sensitization campaigns of traditional leaders; targeted bursary support; and quota allocations to female learners. In its efforts to promote gender equality in national development, government adopted the National Gender Policy in 2000, which was revised in 2014. The policy highlights a number of policy areas, which include education and skills training. It takes into account the Convention on the Elimination of All Forms of Discrimination Against Women (1979); the Beijing Declaration and Platform for Action (1995); the SADC Declaration on Gender and Development (1997); and the millennium development goals (MDGs) of 2000.

HIV and AIDS

The impact of the HIV and AIDS epidemic in the Southern African subregion is well documented. Zambia is one of the 12 countries most affected by the epidemic in the subregion. Given the high numbers of teachers, non-teaching staff and learners, the university education sub-sector is one of the most affected sectors in the country, with learners being highly vulnerable to HIV infection. The direct impact of HIV and AIDS in the country has been high mortality rates of teaching staff and

learners, reduced attendance, disruption of classes due to frequent sickness, absenteeism, deaths and funerals, shortage of teaching staff, and economic losses linked to early retirement of teaching staff and the additional cost of training staff to replace those who have left the service prematurely. Thus, HIV and AIDS is not only a serious health and socio-economic issue, but it also negatively affects the quality of education.

To address the negative impact of HIV and AIDS in the sector, the MoGE, with support from its partners, developed HIV and AIDS workplace policies and programmes. The programmes were aimed at effective prevention, care and support, and management of the response to the epidemic, to create a conducive teaching and learning environment where teaching staff, non-teaching staff, and learners were not stigmatized or discriminated against based on their HIV status. In 2014, the government revised the sector policy on HIV and AIDS to be fully inclusive of the needs of all aspects of the sector. The policy was developed in the context of the country's multisectoral approach to prevention, care, support, and mitigation.

Financing students' higher education

High poverty levels continue to be a barrier to access, and the provision of financial support to selected students at these institutions has not been adequate to meet the demand. In addition, the urban location of most higher education institutions continues to contribute to difficulties in access for rural-based secondary school graduates. In order to improve equity in the provision of university education, the MoHE commenced the revision of the student financing mechanism to ensure that vulnerable students in terms of finances, gender and disability would benefit from the student loans. In 2017 the MoHE undertook to establish a loan recovery platform and develop guidelines on loan disbursement, administration and recovery as well as investment portfolios for growing the fund. This has led to the establishment of the Higher Education Student Loans and Scholarships Board (HESLSB), which will put the scheme into effect.

Government financing for higher education provides enabling conditions to universities. However, the higher education system as a whole suffers from weak resource management and ineffectiveness, thereby promoting inequity. The increased public expenditure on higher education appears not to be effective and efficiently utilized. Giving public universities grants without sufficient monitoring for prudence is commonplace. Although it has been in the education policy to expand higher education, the majority of the university enrolment is from the urban population.

While the bursary scheme had a built-in mechanism to identify poor and rural students, the majority of the students who come to universities are from urban and better-off households. Therefore, huge subsidies to universities through the bursary scheme benefited the relatively rich segments of the population and thus contributed to an inequitable distribution of public expenditure. In order to redress this and improve on equity in the resource allocation to higher education, the government put in place a student loan scheme in 2004. The Higher Education Loans and Scholarships Act No. 31 of 2016 was enacted and the Board inaugurated in July 2017. By the end of 2017, the loan repayment mechanism had not been developed and none of the beneficiaries had repaid the loans to allow the funds to revolve to other beneficiaries.

Organization and management

The key stakeholders in higher education comprise government, regulatory and quality assurance bodies, and higher education institutions. Government provides policy direction and establishment of public higher education institutions. However, different line ministries play this role by providing policy and legal oversight to institutions of learning in specialized areas such as health, agriculture and public administration. This has created segmentation and lack of synergies in the provision of higher education. It has also affected the standardization of quality assurance due to varying quality assurance and regulatory bodies. In addition, the regulatory and quality assurance framework needs reviewing to remove conflicts and contradictions that affect structural provisions and mandates.

There is, therefore, a need to reconcile the whole higher education sub-sector under one organizational framework with a single policy and legal framework. This will entail the dovetailing of the various existing policies and pieces of legislation into one overarching national intervention that will coordinate the policy formulation of education in an integrated manner to fit into the dictates of the 7NDP. This will also entail the migration of all public higher education institutions to a single line ministry that would be responsible for higher education in the country

Partnerships in higher education involve all providers and include the ministry responsible for higher education and skills training, other government ministries, communities, civil society organizations (CSOs), cooperating partners (CPs), and the private sector. Other auxiliary partners contribute to education through health (the wellness of the learners) and water, sanitation and hygiene (sanitary living conditions). These auxiliary partners play a vital role in the realization of the 7NDP Pillar 4 of 'Enhancing Human Capital' in the country. This effective partnership is founded on the government's approach of an integrated approach to formulating and implementing the overarching national plan.

Key government stakeholders in higher education provision include the ministries responsible for general education, higher education; agriculture; finance; tourism; and health. These ministries participate through the provision of higher education in different specialized institutions. In addition, ministries responsible for health and water and sanitation participate through the provision of auxiliary services necessary for a functional human capital resource.

The private sector plays a key role in the provision of higher education, with over 61 privately owned universities. This is done in the bid to supplement the government effort, as well as to cater for various programmes that cannot be offered in government institutions. A number of universities are also operating as faith-based institutions.

Financing of university education

Funding to public universities in Zambia is through a combination of direct government funding and user fees charged by universities. Financing is also ideally supposed to be sourced through research and consultancy. This has not been the case, however, due to poor financing for research and weak accountability mechanisms especially for resources earned through consultancies.

The public higher education institutions derive most of their funding from the government. While there are variations according to the type of institution, the remainder of their funding comes from fees and income-generating activities. Costs for capital development, personal emoluments, and staff and programme development for public institutions are either borne directly by the state or paid by the institutions with the aid of a state grant. User fees go to meet the other running costs and overheads. Other institutionally generated revenues provide for some financial leeway and allow for minor developments and improvements.

The principle of this tripartite financing arrangement is satisfactory, but the practice is not. The government continues to bear an excessively large proportion of the costs of higher education. The contribution from the other financing partners remains low. On the other hand the private institutions are self-financing in terms of personal emoluments, infrastructure and programme development.

In Zambia, the public higher education and skills development sector broadly follows three financing modalities of budget support, pooled funding, and projects. These modalities are governed by international protocols and agreements, such as the Paris Declaration, the Busan High Level Forum, and the Accra Agenda for Action. Further, the guiding principles of financing education are based on efficiency, cost-effectiveness, equity, cost sharing, accountability, income generation, and cooperating partners (CPs) support.

Government has institutionalized the Medium-Term Expenditure Framework for its budgeting at all levels, to ensure that funds are disbursed in line with the planned programmes. This has been used to improve the quality of higher education. With regards to capital budgets, each year the ministry allocates funds for the construction and maintenance of infrastructure, and the purchase of equipment and furniture for these institutions.

Given the limited availability of public resources and the legitimate competing demands of other sectors of the economy, it is clear that government budgetary allocations alone will not be sufficient to ensure quality higher education for every eligible learner. Provision for higher education must take into account government investment, ability to pay and the quality of service being provided. Therefore, there is a need to ensure that whatever measures are introduced will not make the participation of the poor, people with disabilities, females, youths or other vulnerable groups more difficult.

The interventions outlined in the 7NDP that seek to promote private sector participation in the provision of higher education will require deliberate efforts by government to not only provide incentives but also create a conducive governance environment for private sector participation in the financing of higher education.

Skills development

Skills development is within the Ministry of Higher Education and is implemented by the TEVET programmes. The TEVET system is arranged at three levels: (i) policy level (MoHE and TEVET line ministries such as MoGE, MYS, MLSS); (ii) regulatory level, i.e., TEVETA; and (iii) training provision level, i.e., registered TEVET institutions with different providers.

There was a major policy reform in TEVET in 1996, resulting in the establishment of TEVETA in 1998. The role of TEVETA is to regulate, coordinate and monitor skills training in consultation with industry, employers, workers and other stakeholders. This is done to ensure that TEVET institutions adhere to prescribed quality assurance systems. As part of the reform process the TEVET system was opened up for private training providers, resulting in a greater number of institutions providing skills development countrywide.

In the 2015 Budget for MoHE, skills development only received an allocation of ZMW153 million out of the total budget of ZMW9,415 billion (1.6 per cent), and recent actual expenditures on TEVET have been less than 1 per cent of total government expenditure.

The Zambian TEVET system suffers from a variety of financial shortcomings that prevent the provision of equitable and accessible quality training. The TEVET fund is no longer supported by CPs and has lost significance as a financing mechanism for TEVET institutions. Larger TEVET institutions have less difficulty in financing their operational costs from student tuition and other fees because of their economies of scale, but for smaller TEVET institutions, GRZ support remains critical. However, all institutions experience difficulties finding resources to invest sufficiently in equipment and maintenance.

In order to improve the financial viability of the TEVET system in Zambia, the Ministry of Finance recently introduced a Skills Development Fund (SDF) to address the challenges of inadequate skills among craft individuals, artisans, technicians and technologists. The fund resembles a dedicated stock or flow of financing outside normal GRZ budgetary channels to foster the development of productive skills for work, and is funded by a direct levy. The fund is intended to invest in workshops, laboratories, equipment and other requisites for quality skills training. In terms of efficiency, GRZ has developed the Skills Development Fund Implementation Framework and the Skills Development IP. These contain the SDF implementation strategy and its operational manual, which guide the implementation of the levy and stipulate its monitoring framework. The levy is expected to provide financing that will be used to enhance the quality and relevance of TEVET, as well as improve the general efficiency in TEVET, and will also provide a basis for increased participation of the private sector in TEVET.

The following players participate in the provision of skills training in the TEVET institutions: government, faith-based organizations, non-governmental organizations and the private sector. Management boards run those TEVET institutions that are under the Ministry of Higher Education. The board members are constituted from the various constituencies according to the individual statutory instruments. The Ministry of Higher Education provides the policy framework. The training institutions provide training to the students while the TEVETA provide the regulatory framework, registers and accredits the lecturers, assessors, examiners and students in the institutions.

Access and equity in TEVET

There are currently 293 training institutions registered with TEVETA. Government/public institutions account for 32 per cent of all TEVET institutions in Zambia. The rest of the institutions are private (30.4 per cent), church/faith-based (19.5 per cent), community (2.7 per cent), trust (2.4 per cent), company (8.9 per cent) and NGO (4.1 per cent). About 82 per cent of the training institutions registered with TEVETA are along the line of rail, with Lusaka Province having the largest share of these institutions. This implies that rural areas are under-served. These institutions provide training at various levels of qualifications ranging from Certificate to Diploma. The number of learners in TEVET institutions rose from 36,124 in 2008 to 45,000 in 2016, with a completion rate rising from 70 per cent in 2008 to 80 per cent in 2017.

Public TEVET institutions are managed by a variety of other line ministries, alongside MoHE. In order to improve coordination in the delivery of skills development among all these ministries, there is an Inter-Ministerial Committee which was established to address issues of common interest and coordinate the activities of the sector.

Access to TEVET is hampered by a variety of factors, though four key issues stand out:

- First, public perception of TEVET is problematic as TEVET is considered to be second choice to university education. This is attributed to the fact that TEVET institutions fail to attract young people because most courses offered are considered to be of low societal status, even though there are shortages of such professionals in Zambia;
- Second, the current availability of various bursary schemes cannot ensure that many low-income families can afford the tuition fees and other costs of learning. This inability is reinforced by the fact that TEVET providers (especially those offering higher levels of TEVET programmes) are concentrated in Lusaka, Copperbelt and Southern Provinces which increases the costs for students from other parts of the country who require boarding facilities.
- Third, access to TEVET is hampered by academic requirements and qualifications offered. Potential students are not accepted because their (non-formal) qualifications are not recognized, while for others the qualifications offered are too 'low' and TEVET offers too few opportunities to advance to university classes.
- Finally, TEVET institutions generally lack the physical infrastructure and skilled instructors to accommodate and train students with physical or mental disabilities.

Access to TEVET services by the potential and eligible population is at less than 13 per cent, whereas the average range for middle-income economies is between 20 per cent and 30 per cent. Under skills development, GRZ is committed to increase the number of learners in TEVET Institutions from 36,124 to 45,000, increase the completion rate in TEVET programmes from 70 per cent to 80 per cent, upgrade lecturer qualifications, and construct and rehabilitate TEVET infrastructure.

In terms of access to skills training, GRZ intends to adopt the use of alternative modes of training such as work-based learning, TEVET learnership, open and distance learning, recognition of prior learning and informal sector training through the Skills Development Fund. In order to improve the quality and relevance of TEVET training to industry, the ministry is committed to promote a TEVET curriculum that is responsive to economic and social demand, as well as to upgrading lecturer qualifications and provision of training equipment to the TEVET institutions.

Quality in TEVET

Training institutions are graded 1 to 3 in accordance with the minimum training standards stipulated by TEVETA. The majority of the institutions are graded 3, which implies that these institutions have a number of challenges in managing training.

Next to inequitable access, the quality of skills training provided is of concern in Zambia. This can be attributed to the large number of institutions that are graded 3 according to the Minimum Training Standards. Quality training implies that students are sufficiently equipped with skills that in demand on the labour market are now and in the (near) future. This requires the right curricula, skilled instructors and proper training equipment and materials for practice.

Currently TEVET curricula are not in line with technological changes and industry skills requirements. Further, the training institutions lack the required modern training equipment and materials to enable them to offer quality training. This has led to the skills mismatch between skills offered by training institutions and those demanded by industry. At the same time, trainers themselves are not familiar with the current industry skills needs. This can be attributed to the lack of opportunity for periodical training in industry to update their skills.

In view these problems, GRZ has put in place various strategies to mitigate the above challenges. These include review of the curriculum to meet current industry needs, retraining of lecturers to upgrade their qualifications, equipping the institutions with modern training materials and equipment, and rehabilitating existing infrastructure.

Financing of TEVET

The financing structure for TEVET institutions is organized in a different way to other sub-sectors. Like the national universities, TEVET institutions have financial autonomy and are run by management boards. The public TEVET institutions are allocated grants that are based on historical trends, but lack clear allocation criteria. TEVET institutions are financed in four main ways: (i) tuition fees paid by students; (ii) monthly grants that are provided directly by the MoF, the level determined by the MoHE; (iii) income-generating activities; and (iv) intermittent financing by CPs.

Key issues for higher education

- (a) **The guiding policies for skills development are clearly articulated in the TEVET Policy, 7NDP and the Vision 2030.** In all these documents, the emphasis on improving the sector has been identified to lie in the enhancing of private sector participation. It is envisaged that the private sector will help improve the quality and relevance of training, thereby attracting more learners in TEVET that stay longer in the system, and acquire lifelong skills and competences. In line with the human capital development pillar in the 7NDP, GRZ will focus on increasing access, improving curriculum, enhancing private sector participation and enhancing the role of STI in relation to TEVET.
- (b) **Though improvements have been made in the last decade, access to university education remains a significant challenge.** The main reason for this is limited infrastructure in the higher education sector (currently, access is between 10 percent and 15 per cent of eligible entrants).
- (c) **Poor student support systems exist for vulnerable learners** who cannot access loans or bursaries especially for private universities, because at PUs and TEVET institutions data on vulnerable learners are not captured and they are not accessing loans and bursaries.
- (d) **In order to increase access and participation in skills development, GRZ has recently implemented a skills development levy which will help finance TEVET.** This levy is expected to not only finance student training, but also to help improve quality by providing equipment and training materials in institutions. Through this levy, GRZ also intends to improve the participation of female learners in targeted TEVET courses, as well as learners in remote areas.
- (e) **It is crucial to strengthen regulatory functionalities** of the HEA, TEVETA and ZAQA as a way of maintaining and improving quality and credibility.
- (f) **Higher education suffers from poorly equipped libraries and inadequate ICT infrastructure** to facilitate modern learning and research.

- (g) **Improved higher education funding to universities, TEVET and STI is crucial** to address issues related to debt, productivity and innovation in different respective centres.
- (h) **There is a need for balanced and responsive curricula and support materials** to reduce the mismatch between training and industry in all higher education institutions, universities, TEVET and STI.
- (i) **There are poor linkages between higher education and research institutions**, as well as between institutions and the industries.
- (j) **There are inadequate qualified staff for different levels of higher education attainment and competences.** In some cases there are no experienced staff at all in many higher education and research institutions.
- (k) **The negative perception of TEVET programmes undermines demand for TEVET.** School leavers prefer to go to conventional universities at the expense of skills development and survival skills.
- (l) **Private sector participation will improve synergies between training and industry.** It will provide an opportunity for internships and apprenticeships which are important for both learners and lecturers. In this regard, the sector has already begun developing a workplace-based learning (WBL) framework and an apprenticeship framework.

3.17 SYSTEM MANAGEMENT

A number of management issues have already been noted in the sections above, the most notable of which are: the procurement and distribution of TLM, and the equitable deployment of teachers in order to reduce the pupil:teacher ratios in schools throughout the country. Successive studies have identified teacher management as a major factor related to both learning outcomes and internal efficiency. Teacher distribution (across the country, and between schools) and utilisation (workload, actual time on task) are very uneven. Recent work by MoGE on teacher payroll mismatch (teachers not teaching where they are officially assigned, receiving allowances of which they are not entitled etc.), suggests that there is an urgent need to build systems that ensure that policies are implemented, and to ensure that where policies are no longer functional, they should be changed.

In addition to these issues, the devolution of education functions to Local Authorities presents significant opportunities (and threats) for increasing efficiency in the ECE, primary and YALE, which are the sub-sectors most affected by decentralization. To improve efficiency and effectiveness in service delivery, GRZ will decentralize and devolve some functions. Groundwork has already been done in terms of legal frameworks. The major policy is to devolve power, authority, and relevant functions concerning ECE, primary education and YALE from national HQ to provincial and district offices, as well as to schools.

The separation of MESVTEE into two ministries in 2015 had substantial implications for education system governance including teacher education, supply and management. The ESA points out that the ministries will need to continue to give attention to strengthening planning, coordination and monitoring of this key area. There are also challenges in the area of skills development as both ministries are providing such services.

The overall responsibility for the general education sector falls under the leadership of the Minister for General Education, assisted by a Permanent Secretary. The overall daily administration lies in the hands of the Permanent Secretary, who is the controlling officer and overall supervisor of the general education sector (see section 3.7, above).

The MoGE and the MoHE (which covers all tertiary education, including TVET) have different governance structures. However, even the current structures are most likely to change as the government implements the decentralization policy, which is meant to devolve power to the lower levels so that the headquarters can concentrate on policy formulation and resource mobilization.

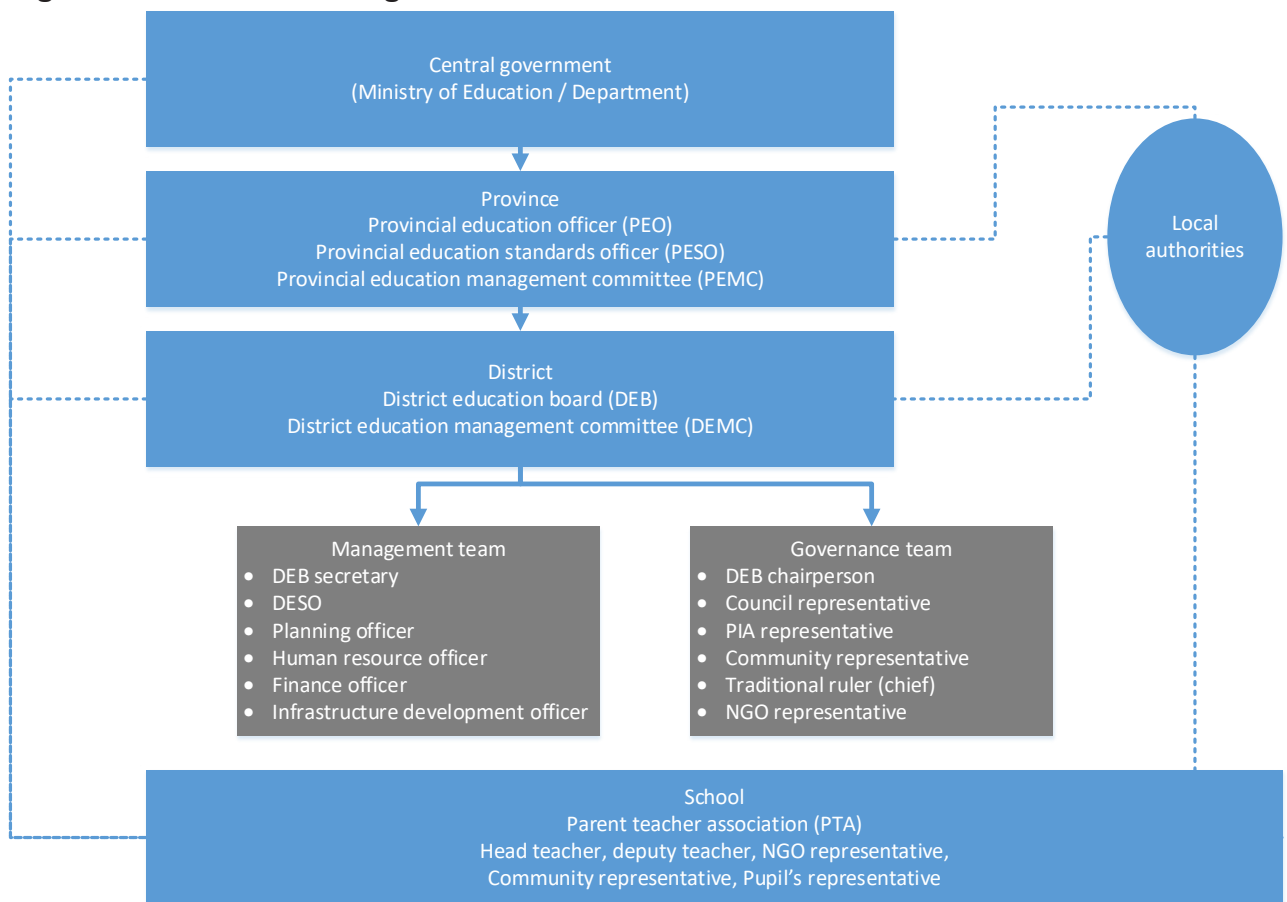
The current decentralization policy being implemented from 2017 calls for decentralizing and devolving competences, authority, and the relevant functions from national to provincial headquarters, districts, and schools; and to implement the National Decentralization Policy provisions relating to the devolution of early childhood education (ECE), primary education, and youth and adult literacy to local authorities.

The current form of educational decentralization in Zambia was consolidated with the Basic Education sub-sector Investment Program (BESSIP) in 1999 and through the establishment of District Education Boards (DEBs) in 2003, in order to implement the policy and create synergy between central government and local communities in education service delivery. These mechanisms were further reinforced by the development of the MoE Strategic Plan (MoESP) 2003–2007. Educational decentralization was also adopted as a strategy to accelerate progress towards EFA, by improving access to basic education and its quality, especially in rural areas.

Through the decentralization policy, GRZ established three levels of educational governance: the national headquarters in Lusaka; ten provincial education offices (PEOs); and 105 DEBS. According to *Educating Our Future*, MoGE is responsible for enacting laws, developing policies, formulating national plans, procuring and allocating resources, developing curricula, setting national standards, and conducting monitoring and evaluation.

The concrete manifestation of education decentralization in Zambia was the establishment of the DEBs, which constitute the administrative epicentre for transforming policy intention into practice. The adoption of education decentralization entailed re-structuring the Ministry at different levels (national, provincial, and district) to realign it with the objectives of decentralization and to allow effective and efficient functioning of the DEBs.

Figure 3.19. Restructuring for decentralization



The fundamental education reforms of the 1990s placed emphasis on a decentralized education delivery system in line with the democratic and liberal tenets of contemporary governments. In keeping



with the democratic and liberal philosophy of the country under the multi-party political system, the Government decentralized the management of public service delivery based on corporate governance principles. Corporate governance as a system allows communities to participate in the affairs of their government through decentralized organizational structures or arrangements. This process saw the establishment of Management Boards in the public sector. The purpose of establishing these boards was to increase community participation in the governance and management of public service institutions. This enhanced a sense of ownership, which ultimately result in improved quality service delivery.

For practical purposes, the Ministry of Education decided to first pilot the education management boards on the Copperbelt Province. All districts on the Copperbelt were declared Education Boards along with all secondary schools and few identified large basic schools. Although all districts were declared boards in the 2000s, along with all public and grant aided secondary schools and colleges of education in the country, de-concentration, devolution and actual decentralization were done in piecemeal leading to low envisaged dividends. A fundamental challenge was the absence of an articulate policy and legal framework to give impetus to the education ministry efforts. Fortunately, in 2002, the Government of the Republic of Zambia launched the policy on decentralization that focused on four areas of: deconcentration; devolution; delegation; and privatisation.

Although there has been demonstrable political will to compel line ministries and centralized government systems to implement the decentralization policy to the letter, the inherent civil service lethargy largely accounts for lack of implementation of the decentralization policy. When there was no national policy on decentralization, the Ministry of Education was moving with great speed in the direction of deconcentration. However, with the advent of the national policy there has been a very low level of motivation in the ministry, and this calls for an open inquiry as there is an apparent absence of intrinsic drive within the sector. There is a need to ensure that the fire for a self-driven MoGE drive to decentralize service delivery is re-ignited within this plan period.

In this context it is useful to refer to the UNESCO policy review of 2015, which identified challenges that arise from the implementation of education policies and programmes, which is often hampered by ineffective accountability mechanisms, poor regulatory frameworks, weak enforcement of laws and regulations, and, to some extent, resourcing issues, such as the shortage of skilled staff. These are largely matters of organizational efficacy and efficiency which have been signalled throughout this section.

STRATEGIC FOCUS OF THE ESSP

4



4. STRATEGIC FOCUS OF THE ESSP

4.1 THE THEORY OF CHANGE OF THE ESSP

The ESSP addresses a growing global consensus that investments in education must focus on achieving improved learning outcomes.²⁴ In many developing countries, including Zambia, children are not learning enough despite being enrolled in education systems. This is because of multiple factors including: service delivery challenges and lack of accountability; technical factors; deeply rooted systemic constraints; and, of course, contextual challenges such as socio-economic factors that, in general, constitute the major factor associated with educational outcomes.

Recognizing the complexity of development challenges and the need to achieve sustainable 7NDP goals, the ESSP strategy calls for multisectoral and integrated programming to ensure that stakeholders work together to achieve desired outcomes. Critically, the call for integrated programming ensures a careful use of limited financial resources. The ESSP, thus, makes strategic choices to address critical financial constraints that will characterize education policy implementation in Zambia for the period 2017–2021.

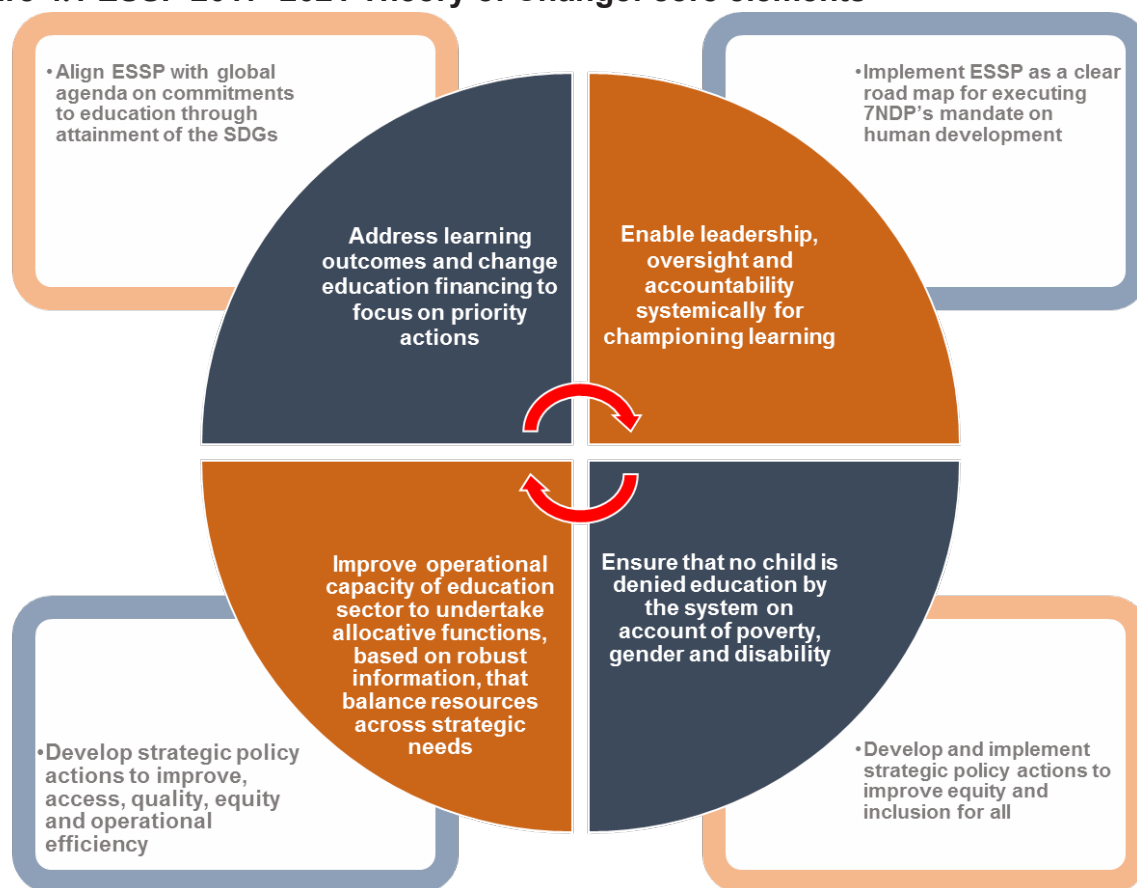
Accordingly, the ESSP ToC addresses key constraints that underlie the performance of Zambia’s education sector. The ToC specifies the key levers for realizing the vision of the ESSP, which is **“to achieve quality and relevant lifelong education and skills training for all”**. In view of this, improved learning has become a programming imperative, requiring bold strategic policy choices and actions to understand, prioritize and address specific challenges across sub-sectors, ensuring that no child is denied education on account of poverty, gender or disability and critically improving management efficiency to ensure that young people leave school with the skills they need to participate in society and the global economy at large.

Additionally, the ToC aligns with the SDG4 and ensures that the ESSP domesticates global commitments on education. The goal is to align the efforts of all actors to make the education system work for learning. As the World Bank notes, many countries are stuck in low-learning traps, and extricating them requires focused attention on the deeper causes of underperformance (World Bank, 2018). The ESSP’s ToC addresses the causes of underperformance through the four themes of access, quality, equity and efficiency. In particular, the ESSP’s ToC espouses a steadfast commitment to systemically improving accountability for education policy action linked to learning outcomes.

For this reason, the ESSP makes assessing learning outcomes a critical driver for decision making over the strategy period. This includes developing the right metrics to measure learning achievement, particularly in the areas of reading and mathematics. The ESSP also prioritizes oversight of teaching and learning to ensure the effective and efficient application of scarce education resources. Besides expanding learning facilities, the ESSP is committed to ensuring that teachers and other skills instructors are appropriately qualified to teach and are assigned where they are needed the most. These strategic priority areas have been identified through an iterative process in which key stakeholders including the MoGE and MoHE, represented by various technical directorates, civil society organizations and CPs participated. Despite all of this, the ToC recognizes that – as research in many countries shows – policy factors, such as pupil:teacher ratio, school management, numbers of trained teachers, availability of TLM, etc., are not as strongly associated with learning outcomes as are non-policy factors such as socio-economic backgrounds.

Figure 4.1 outlines the core elements of the ESSP’s ToC. The key themes of the ToC are aligned with the ESSP IP 2017–2021 and also included in the M&E Framework. These themes are also aligned with the four major sets of issues identified in the preceding section, which are related to (i) learning outcomes, (ii) access that is falling behind population growth, (iii) effective leadership at all levels, from the ministries all the way ‘down’ to the schools, and (iv) the operational, implementational capacities of organizational structures (ministries) involved in delivering educational services. The implementation plan provides details of strategic goals, objectives, activities, indicators (outputs and outcomes with baselines) and targets leading up to 2021.

²⁴World Bank 2018.

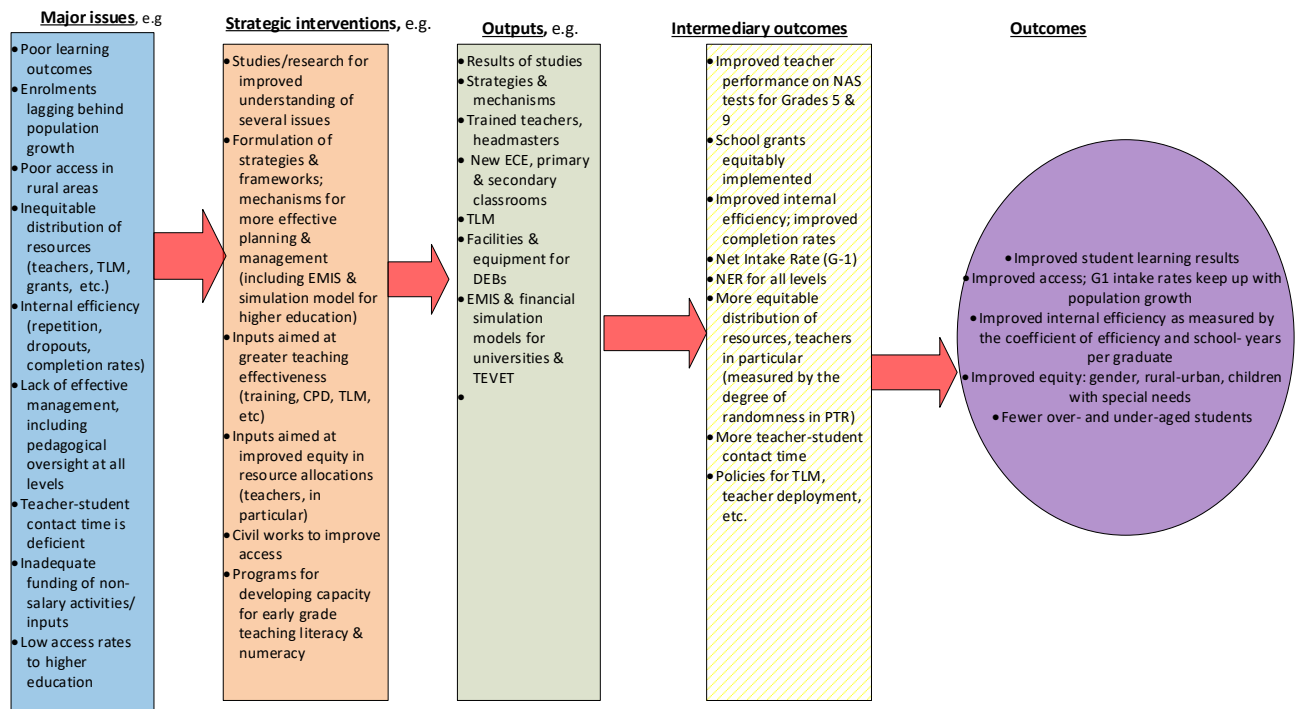
Figure 4.1 ESSP 2017–2021 Theory of Change: core elements

To gain a more complete understanding of how the ESSP intends to promote the needed changes, we need a complement to Figure 4.1 that takes us through from the issues all the way to the desired outcomes. This is the intention of Figure 4.2, which represents the results chain.

The knowledge and analytical basis for this ESSP largely comes from the Education Sector Analysis (ESA), which is focused on the MoGE and the sub-sectors ECE, basic and secondary education.²⁵ The acknowledged shortcomings of this ESA are addressed in this ESSP in the form of activities consisting of studies, frameworks, strategies and mechanisms that account for about 30 per cent of all MoGE-related activities in the implementation plan for 2019–2021. This approach will transform the ESA into something of a living document.

²⁵ The most current version of the ESA is dated January 31, 2018.

Figure 4.2. ESSP Results Chain



4.2 ESSP 2017–2021 STRATEGIC PRIORITIES

The four themes of efficiency, quality, access, and equity cut across all of the sub-sectors of education. The ToC strategic approach is outlined below. Under each theme, a range of activities will be undertaken throughout the implementation of the ESSP. These activities are presented in the following text and in the matrices in Annex 5.

Efficiency priorities

Goal: A well-informed, properly financed and efficiently managed education system that is embedded in a broader societal context that can provide quality education that is accessible for all. A strategic assumption for the ToC is that an education system that is better managed is of crucial importance for the success of the entire ESSP. A well-managed education sector potentially has positive implications for implementing all strategic interventions. A strengthened evidence basis for these interventions, obtained through a reliable education management information system (EMIS), is indispensable. Currently, the education sector has challenges determining teacher supply and managing resource allocation. Efficiency gains will have a direct impact on access, quality and equity. The ToC assumes that the education sector will develop strategic policy actions to improve operational efficiency. In addition, the ministry will take a more proactive approach towards engaging the Ministry of Finance to provide adequate resources for the budgeted activities. The Ministry of Infrastructure and Housing will also be engaged in infrastructure-related activities.

Quality priorities

Goal: The education system generates quality education and learning outcomes. The ESSP is strategically focused on improving learning outcomes. While in the past the concept of quality has been compromised, resulting in financial resources being applied to less pressing issues, the ToC assumes that the focus on learning will prevail as the guiding principle for education programming. In this regard, the ToC assumes that the education sector will strengthen oversight of teaching and learning and ensure that the requisite resources are provided in a timely manner.

Access priorities

Goal: The education system is accessible for all learners and leaves nobody behind. The ToC acknowledges that while the ESSP is pivoting to focus on improving learning outcomes, access continues to be a constraint, especially for secondary education and for early childhood education. Too few children are completing a full cycle of schooling. Young people, especially girls in rural areas, start school knowing of many in their communities who have not completed a full cycle of schooling.

Equity priorities

Goal: An education system that is accessible for all, irrespective of gender, religion, ethnic origin, or any other discriminatory characteristic. The ToC acknowledges that while the education system has achieved significant equity gains by implementing the 50:50 policy on enrolment, a lot more needs to be done – and innovatively – over the ESSP period. The key challenge now is that the system is failing to retain learners, particularly as the opportunity costs of being in school rise with age. Poor learning experiences in turn become push factors, especially for girls, who opt out of school and get married. In addition, the high number of out-of-school children add to the complexity of resolving inequity in the education system.

Children with special educational needs also present challenges for equity goals. With regard to this group, the ESSP departs from the conviction that measures for these children are often costly to address. The ESSP will pursue interventions for children with special educational needs that are most likely to yield results against limited resources. As such, these interventions will best leverage the strategic approach of multisectoral and integrated programming across all sub-sectors.

Overall, given that the SSP operationalized the vision of the 7NDP on human development, the ToC assumes broad political will in support of education. The interventions in the ESSP will work towards developing a robust education system working from ECE to higher education and skills training. The ToC assumes that the sub-sectors will operate in a complementary fashion to provide a continuum of educational opportunities. Multiple CPs are seeking to close gaps in the education system by supporting sub-sectors such as ECE and TEVET because these have an equalizing effect, especially for marginalized populations. The ESSP should be able to leverage this broader trend.

Due to resource constraints, the ToC assumes that the ESSP will draw on the support of communities to achieve its goals, especially in the area of expanding access to education in ECE and community schools. Critically, the ESSP will engage communities to improve accountability for learning outcomes. The 7NDP's vision is to engage citizens in governance and in the provision of public goods and services. Social accountability for learning will also enable the learners to be active agents of their own education. Stakeholder involvement enhances accountability for education management when citizens are empowered to have a larger voice in education delivery. The ESSP will also draw on the support of the private sector, especially for the skills sub-sector.

The activities associated with these priority themes are presented in great detail in the ESSP Implementation Plan – structured by sub-sector – in Annex 3. The costing of this Implementation Plan is shown in Annex 4. The following sections of this chapter explain how the ESSP addresses the issues by sub-sector. The logic of the interventions/activities by sub-sector is presented in the form of matrices in Annex 5.

4.3 EARLY CHILDHOOD EDUCATION: KEY STRATEGIC PRIORITY AREAS

Overview

The government has recognized the important role ECE plays as the foundation for learning and enhancing school outcomes across all sub-sectors. Under the ESSP, the government plans to increase access to ECE and close service delivery gaps especially between urban and rural areas. The ESSP recognizes that because ECE is still being established, it is important to ensure that steps are taken to improve access and quality. Of prime importance for the ESSP is to ensure that ECE is not delivered as primary education but in its own right as a foundational stage.

Typically, because a significant part of the MoGE's strategy in creating ECE services has been to annex classrooms in primary schools, there is a chance that learners will be subjected to primary-level instructional approaches. This is especially the case for ECE centres that have insufficient teachers, and lack teaching assistants and caregivers. Moreover, many teachers trained at ECE level have shifted to primary schools. The ESSP will also enhance the delivery of ECE by instituting quality assurance measures such as undertaking various assessments, ensuring teachers are trained and assisting learners to transition to primary education.

The ESSP will prioritize the following key strategic areas for ECE:

- Expand access to ECE centres
- Improve quality of ECE provision
- Improve equity in the delivery of ECE.

Expand access to ECE centres

ECE has mainly been provided by the private sector and non-governmental organizations (NGOs) in urban areas. However, in 2012 the MoGE started to establish ECE centres mainly through annexing them to existing primary schools. Accordingly, ECE centres face the challenge of inadequate and inappropriate infrastructure. ECE classrooms have typically not been adapted for their purpose. For example, the furniture is not appropriate for ECE learners and water points as well as sanitation facilities are not age appropriate. The play parks are bare or have very few resources. Some ECE schools have been established in combined schools, making it a challenge to ensure that young learners are not sharing the same space as older ones.

In collaboration with other stakeholders from the private sector, civil society, community partners and faith-based organizations, the ESSP plans the following specific strategic areas for 'Creating New ECE centres' outlined in Annex 5:

- Establishing low-cost community and alternative-based ECE centres;
- Strengthening PPP in provision of ECE; and
- Constructing model ECE centres.

Improve quality in ECE provision

Child stimulation is a critical part of delivering effective ECE services. The ESSP will increase the supply of suitable play and learning materials to ensure that learners are surrounded by a stimulating environment. The materials will also assist teachers to apply child-centred and play-based methodologies as required at ECE level. The specific strategic interventions for 'providing suitable play and learning materials' are outlined Annex 5. They include:

- Providing suitable play and learning materials;
- Implementing school readiness assessment;
- Implementing child developmental milestones assessments;
- Internal quality assurance of ECE education delivery; and
- Collaborating with communities to provide caregivers.

Improve equity in the delivery of ECE

The ESSP will remove barriers to ECE by leveraging the support of communities, the private sector and other stakeholders. Typically, disadvantaged groups are too poor to access ECE services. This is especially the case for people in rural and hard-to-reach areas. Learners often face long distances

to attend ECE centres, which acts as a barrier to access. They have to deal with obstacles on the way such as rivers, insecurity, and bullying. In addition, the important roles of caregivers and teaching assistants are not adequately recognized in teacher recruitment efforts. Additionally, training and remuneration of ECE staff and caregivers is often supported by individual communities.

Beyond issues of poverty, ECE must be responsive to the needs of children with special educational needs. The ESSP acknowledges that access to ECE is very limited for this group of children. ECE offers a window of opportunity to identify and intervene, to address the challenges faced by children with special educational needs, but there is a lack of integration of these issues in ECE provision. There are only a few opportunities for children with special educational needs in ECE in terms of adequate infrastructure, trained SEN teachers, and equipment and materials.

The specific strategic areas to 'Remove Barriers to ECE' are outlined in Annex 5. They include:

- Sensitize the public on community and private-driven establishment of ECE centres;
- Conduct advocacy programmes at all levels on the concepts and benefits of ECE;
- Strengthen PPP in the provision of ECE; and
- Sensitize the communities on the integration of children with special educational needs in ECE.

4.4 PRIMARY EDUCATION: KEY STRATEGIC PRIORITY AREAS

Overview

The primary education (PE) sub-sector forms the largest part of the education sector. The ESSP aims to resolve learning challenges throughout the primary school cycle by ensuring that qualified teachers are equitably available in sufficient numbers across all regions and that there are robust mechanisms to continuously update their skills and make sure that they are teaching. The ESSP will also focus on improving instruction in literacy and numeracy while placing emphasis on learning assessment to ensure remediation.

Under the ESSP, the MoGE will also expand measures designed for catch-up learners who have been left behind. As an important aspect of ensuring that children are progressing desirably, the ESSP aims to achieve appropriate age enrolment and integrate out-of-school children. The MoGE also plans to close service delivery gaps, especially between urban and rural areas.

The ESSP has prioritized improving the delivery of primary education through the following key strategic areas:

- Improving the quality of primary provision;
- Improving equity in the delivery of primary education;
- Expanding access to primary education

Improve quality of primary provision

Improving learning outcomes is a key imperative for primary education. Learning outcomes in PE have stagnated over the past two decades. Standardized national, regional and international assessments show, through low learning achievement scores, that a significant proportion of pupils are not attaining the desired competencies. This is despite the MoGE having worked with partners to develop various initiatives, including revising the curriculum in 2014.

The main challenge in improving learning achievement is enhancing the oversight of teaching and learning. Currently, teachers are in the classroom teaching about half the time they are scheduled to do so. Support and supervision of teachers is not performing as is required, and as a result teacher performance reduces significantly. Problematically, teachers' knowledge of content and pedagogical

skills across various subject areas, especially relating to literacy and numeracy instruction, is low. The ESSP has recognized that without the foundational skills of literacy and numeracy in PE, learners will struggle throughout their educational life.

Generally, the rural areas also tend to have fewer teachers if compared with urban primary schools. Teachers that are deployed to work in rural areas typically move to the urban areas because living conditions are not always suitable. Poor housing leads a lot of young teachers, especially females, to shun working in rural areas. Various studies have also shown that teacher absenteeism is high. Low contact time in primary schools requires that every effort is made to ensure that effective teaching and learning is happening. This poor instructional environment negatively affects all pupils, but especially those coming from poor economic backgrounds.

For example, the primary sub-sector has a high number of children who enter school late, predominantly in the rural areas. Late entry into the school system creates a cycle whereby children who should be in school at the appropriate age are left out to accommodate those who have fallen behind. Ominously, however, children who enter school late face challenges coping with the task of learning and dealing with their natural development. Such children are likely to repeat more and in the case of girls who enter school late, they are soon confronted with puberty and dealing with pressures to leave school and get married. Accordingly, late entry, especially for girls in rural areas, becomes a critical push factor out of school – driving the growth in numbers of out-of-school children.

In collaboration with stakeholders including civil society, the private sector, cooperating partners, faith-based organizations (FBOs) and local communities, the ESSP outlines strategies to achieve quality improvement in PE as described in Annex 5. They include:

- Expand targeted literacy & numeracy Interventions in primary education;
- Expand the use of learning formative assessments, in primary education as guided by the National Assessment Framework;
- Nationwide rollout of the catch-up programmes to improve learning outcomes;
- Locally producing and utilization of TLM; and
- Internal quality assurance of primary education delivery.

Improve equity in the delivery of primary education

Despite the government's free primary education policy (FPE), there are various barriers that limit participation especially among poor populations. The number of out-of-school children has continued to grow, driven by insufficient school places and socio-economic factors that push children out of the school system. Rural girls, especially, tend to drop out beginning around the fifth grade. Poor WASH and menstrual hygiene management (MHM) conditions also limit the participation of girls in school.

Other issues creating barriers include learning challenges especially for CSEN. The primary education system has not developed a robust approach for identifying CSEN.

The specific strategic interventions to 'Improve Equity in the delivery of Primary Education' under the ESSP are outlined in Annex 5. The key strategic areas identified include:

- Nation-wide rollout of the fast-track programmes to integrate out-of-school children;
- Expand school feeding programmes;
- Strengthen WASH and MHM programmes in schools;
- Provide bursary support to disadvantaged pupils; and
- Conduct early and ongoing screening for learning challenges.

Expand access to primary education

While the ESSP targets improving quality as the overriding priority for primary education, it is still committed to improving access especially in the rural and hard-to-reach areas where long distances between schools prevent children from participating in education. The urban areas too have a challenge because of how schools are distributed, resulting in over-enrolment in high-density areas and under-enrolment in low-density areas. In view of this, the government will build schools close to the community in the rural areas to reduce walking distance. For the urban areas, there is no space where schools could be built, thus the government will build more classrooms at existing schools or explore buying-off houses which will be demolished to create space where to build the schools.

As the government's resource envelope does not support a huge investment in new construction, the ESSP will engage local communities to improve the supply of primary schools using the community mode of construction. The ESSP will also use alternative modes, based on technology solutions provided under AMEP, to reach more learners.

In collaboration with stakeholders including civil society, private sector, CPs as well as faith-based organizations (FBOs), and local communities, the ESSP outlines strategies to achieve appropriate-age enrolment as described in Annex 5. They include:

- Build more classrooms using community mode; and
- Use alternative modes for primary education delivery.

Develop strategy to reduce distortions in the allocation of teachers

A key challenge the primary school sub-sector faces is that the rural areas tend to have fewer teachers if compared with urban ones. Teachers that are deployed to work in rural areas typically move to the urban areas because living conditions are not always suitable. Poor housing leads a lot of young teachers, especially females, to shun working in rural areas.

The specific strategic interventions to reduce distortions in the allocation of teachers under the ESSP are outlined in Annex 5. The key approach identified is to develop a strategy to:

- reduce imbalances in the allocation of teachers by gender, rural/urban.

Build capacity of teachers to undertake literacy and numeracy instruction

The ESSP has recognized that without the foundational skills of literacy and numeracy in PE, pupils will struggle throughout their educational life. The ESSP aims to improve the literacy and numeracy instructional skills of teachers, especially for the early grades. National and regional assessments of teachers' skills are showing that teacher quality is a critical issue for PE. The specific strategic interventions for building the capacity of teachers to undertake literacy and numeracy instruction are outlined in Annex 5. They include:

- Expand targeted reading and numeracy interventions in PE; and
- Devise mechanisms to strengthen the teaching of foundation literacy and numeracy.

Build capacity of head teachers to supervise teaching and learning in pe

The ESSP has prioritized strengthening the capacity of head teachers to provide effective oversight of teaching and learning. Globally, evidence shows that head teachers are influential in the running of schools. Schools that do not have strong supervisors suffer teacher absenteeism, poor preparedness and wastage of learning time. Various studies have shown that absenteeism is high in Zambian schools and even the teachers that are present are not always focused on their work. Low contact times in PE require that every effort is made to ensure that effective teaching and learning is happening.

The specific strategic interventions to strengthen the capacity of head teachers to supervise teaching and learning are outlined in Annex 5. The key approach identified is to:

- Enhance head teacher supervision and leadership skills to increase learning outcomes.

4.5 SECONDARY EDUCATION: KEY STRATEGIC PRIORITY AREAS

Overview

The secondary education (SE) sub-sector has fallen behind in terms of investment since the 1980s. Even though the government has pushed to expand secondary education in recent years, the school places created are still insufficient. Typically, less than 30 per cent of all pupils who start school in Grade 1 go on to complete secondary school. A large proportion drop out because there are no school places available. This situation will take a long time for the government to overcome in view of the inadequate resources available. The ESSP therefore aims to expand the number of classrooms in SE. It also aims to ensure that qualified teachers are equitably available in sufficient numbers (by subject) across all regions with robust mechanisms to continuously update their skills and make sure that they are teaching. The ESSP will also place emphasis on the teaching of science, technology and mathematics (STM).

Under the ESSP, the MoGE plans to expand guidance and counselling services to ensure that learners, especially girls, get the support they need. The MoGE will also expand measures to improve oversight of teaching and learning.

The ESSP has prioritized improving the delivery of SE by using various strategies including alternative modes working in the following key strategic areas:

- Increase the number of classrooms in secondary education;
- Improve the quality of secondary provision;
- Improve equity in the delivery of secondary education.

Increase the number of classrooms

A key challenge the SE sub-sector faces is the wide gap between the demand for and supply of classroom space. In view of the financial constraints facing the education sector, the SE sub-sector will explore innovative approaches to expanding school places. Working in collaboration with stakeholders including civil society, the private sector and cooperating partners, as well as faith-based organizations (FBOs), and local communities, the ESSP outlines strategies to expand classroom space in SE as described in Annex 5. They include:

- Strengthen evidence-based allocation of school infrastructure;
- Construction of standard low-cost model secondary schools closer to the communities; and
- Strengthen use of alternative modes in the provision of secondary education.

Expand Access to secondary education

A key challenge the SE sub-sector faces is the wide gap in the demand and supply of classroom space. In view of the financial constraints facing the education sector, the SE sub-sector will explore innovative approaches to expanding school places. Working in collaboration with stakeholders including civil society, the private sector and cooperating partners, as well as faith-based organizations (FBOs), and local communities, the ESSP outlines strategies to expand classroom space in SE as described in Annex 5. They include:

- Build more classrooms in existing schools;
- Build more classrooms using community mode;
- Construction of standard low-cost model secondary schools closer to the communities;
- Construction of girls' secondary schools; and
- Strengthen use of alternative modes in the provision of secondary education.

Improved quality of secondary provision

The ESSP has prioritized improving the quality of SE. A key challenge the SE sub-sector faces is not only that there is an imbalance in terms of how teachers are distributed between the rural and urban areas, but also that the proportion of science, mathematics and technology (STEM) to social science is skewed – with the latter being oversupplied. With changes to the curriculum that led to the consolidation of subjects, the situation is that more social science teachers are working fewer hours, sharing time to teach appropriate segments of the revised curriculum.

The other key challenge is that SE teachers are concentrated in urban schools. Teachers that are deployed to work in rural areas typically move out to the urban areas because living conditions are not always suitable. Poor housing leads a lot of young teachers, especially females, to shun working in rural areas. Additionally, teachers are not effectively using learning time because supervision is lacking. Teachers also have insufficient knowledge of content and pedagogical skills, especially in STEM subjects. The ESSP has recognized that without a dedicated focus on STEM, learners will graduate from SE without the skills needed for tertiary education.

The specific strategic interventions to improve equitable recruitment and deployment of teachers in SE under the ESSP are outlined in Annex 5. The key approach identified focuses on:

- Capacity-building of teachers, especially those for science, technology and mathematics (STM);
- Internal quality assurance of secondary education delivery;
- Strengthening the use of learning assessments in SE as guided by the NAF; and
- Local production and utilization of TLM.

The specific strategic interventions to strengthen the capacity of head teachers to supervise teaching and learning are outlined in Annex 5. They include:

- Enhance head teacher supervision and leadership skills to increase learning outcomes; and
- Expand the use of learning assessments in SE as guided by the National Assessment Framework (NAF).

Improve equity in the delivery of secondary education

The ESSP has recognized that schools that provide effective comprehensive sexuality education (CSE) through guidance and counselling are likely to help more pupils, especially girls, to complete secondary school. The SE sub-sector faces a huge challenge with teenage pregnancies. Over 80 per cent of all pregnancies (on average 15,000 annually) reported annually occur among girls enrolled in rural schools. Accordingly, the ESSP aims to ensure that schools are able to support adolescent girls with psychosocial and health information. Substantively, the weak linkages and referral practices between schools and health facilities have resulted in insufficient support by teachers and health workers who are supposed to guide students.

Generally, the ESSP acknowledges that the growing number of school health challenges require a methodical response. Integrating CSE is one important way that needs expanding. But an important

basis for such interventions would be a multisectoral effort that clearly outlines how the ministries of education and health collaborate to address adolescent health issues. The specific strategic interventions for enhancing CSE are outlined in Annex 5. They include:

- Enhance comprehensive sexuality education (CSE) through guidance and counselling;
- Enhance enforcement of the re-entry policy;
- Enhance multisectoral collaboration between schools and health.
- Strengthen WASH and MHM programmes in schools;
- Expand bursary support to disadvantaged pupils; and
- Work with stakeholders for the provision of dormitories for weekly boarding or safe houses.

4.6 ALTERNATIVE MODES OF EDUCATION PROVISION (AMEP): KEY STRATEGIC PRIORITY AREAS

Overview

The ESSP has prioritized Alternative Modes for Education Provision (AMEP) as a strategic area for improving access to education and enhancing learning outcomes across all sub-sectors. AMEP's overriding objective is to empower out-of-school children, youths and adults with basic literacy and functional skills to enable them to participate effectively in community and national development. The ESSP will prioritize the following key strategic areas for AMEP to include:

- Assessing, developing and implementing sustainable cost effective continuing professional development (CPD) for AMEP programme;
- Developing alternative modes of education provision;
- Devising mechanisms to mitigate the growing number of out-of-school children;
- Increasing awareness of benefits of AMEP through IEC framework; and
- Removing barriers to AMEP.

Assess, develop and implement sustainable cost-effective CPD AMEP programme

The ESSP has prioritized AMEP as a service sub-sector supporting all areas of education delivery to leverage alternative modes of learning. In ensuring that AMEP services are delivered within robust support, the ESSP will establish a sustainable and cost-effective CPD for AMEP for its various instructors. The goal is to ensure that AMEP is responsive to the needs of the education system.

The specific strategic areas for assessing, developing and implementing sustainable cost effective CPD for AMEP programmes are outlined in Annex 5. They include:

Developing alternative modes of education provision

Under the ESSP, AMEP will develop various initiatives to increase the provision of alternative modes of learning so as to progressively reach more out-of-school children and adult learners. AMEP has a broad portfolio of initiatives that include: adult literacy classes that are provided in the existing government schools in rural, remote and urban areas; provision of both basic and functional literacy through the two-tier education system and skills training courses such as tailoring and bricklaying; and adult literacy classes that are established in correctional facilities for inmates to cater for marginalized groups in society.

The specific strategic areas for developing alternative modes of education provision under the ESSP are outlined in Annex 5. They include:

- Establish National Electronic Learning Portal for AMEP programmes;
- Establish Technology Enabled Learning (TEL) centres and equip them with Aptus;
- Enhance the use of ICT application in delivery of teaching and learning;
- Develop and upload e-content on National e-Learning Portal;
- Procure new TV equipment for Kitwe Studios;
- Digitalize radio and TV programmes;
- Procure equipment for skills development for skills centres;
- Develop assessments and certification for AMEP aligned to the mainstream curriculum assessment; and
- Domestic regional and international ODL quality assurance mechanisms and protocols through stakeholder engagement.

Increase awareness of benefits of AMEP through IEC framework

The ESSP will increase the visibility of AMEP internally within the MoGE and externally to the wider public, especially among marginalized groups in rural and urban areas. Internally, AMEP lacks visibility among MoGE officials who are not aware of its mandate and services provided. The absence of good information about AMEP internally negatively affects the ability to deliver programmes.

Externally, AMEP requires robust public outreach to cater for marginalized groups in society. With the ever-increasing number of out-of-school children, public outreach is critical to enable more citizens to access education through AMEP. The specific strategic areas for 'Increase Awareness of Benefits of AMEP through IEC Framework' are outlined in Annex 5. They include:

- Reach out internally in the MoGE and externally to publicize the mandate and services of AMEP.

Remove barriers to AMEP

The ESSP will promote access to AMEP by removing barriers for disadvantaged groups. Typically, disadvantaged groups are too poor to access AMEP services. This is especially the case for people in rural and hard-to-reach areas. Constraints in access to AMEP are also linked to the fact alternative modes of education are increasingly dependent on technology solutions.

Beyond issues of poverty, AMEP must be responsive to the needs of out-of-school children and adults with learning disabilities. The ESSP will ensure that AMEP is developed to address the needs of children with special educational needs and adult learners.

The specific strategic areas to 'Remove Barriers to AMEP' are outlined in Annex 5. They include:

- Provide bursary support to disadvantaged students; and
- Produce AMEP TLM for CSEN.

4.7 TEACHER EDUCATION AND SPECIALIZED SERVICES (TESS): KEY STRATEGIC PRIORITY AREAS

Overview

The ESSP prioritizes teachers and issues related to their performance as the primary drivers of success in achieving improved learning outcomes under the implementation period. For Teacher Education and Specialized Services (TESS), its contribution to the ESSP focus is to ensure that teachers are well trained and have the requisite skills to sustainably improve learning outcomes. This

includes ensuring that TESS oversees teacher training programmes (pre-service and in-service) that address national needs. Even though the country has made progress in improving the supply of teachers, their quality remains a serious concern.

Currently, a significant number of teachers are performing moderately and sometimes poorly on assessments administered to learners. While the MoGE has well-established structures for continuing professional development (CPD), they are not always used effectively. The ESSP therefore aims to enhance school-based CPD programmes that pragmatically address challenges in improving instruction with robust mechanisms to continuously update skills. The ESSP also aims to ensure that teachers are qualified to teach foundational skills in literacy and numeracy in the early grades of primary and ECE.

For the higher grades, the ESSP will also place emphasis on the teaching of science, technology, engineering and mathematics (STEM). The MoGE also plans to expand teacher training in guidance and counselling to ensure that learners, especially girls, get the support they need.

The ESSP has prioritized improving TESS in the following key strategic areas:

- Improved responsiveness of teacher education to curriculum development;
- Enhanced equity in teacher education;
- Enhanced effectiveness of specialized services:

Improve responsiveness of teacher education to curriculum development

A key aim for the ESSP during the strategy period is ensuring that teacher quality is aligned with curriculum development. In the past, teacher training colleges have been disconnected from curriculum development. One reason is that school-based initiatives that support teacher training programmes move ahead of pre-service training programmes. For example, the country has moved ahead with improving teacher skills in the area of literacy instruction, while the colleges of education do not have similar capacity for pre-service programmes. As a consequence, teachers graduate without the requisite skills.

Another critical challenge for TESS is to ensure that the right kind of teachers are quickly brought on stream. TESS must develop the capacity for agility in producing teachers the system can utilize as needed. The ESSP also aims to ensure that TESS produces the right kind of teachers in the quantity they are needed. Whereas TESS has done well in producing teachers in the field of social sciences, this has not been the case for STEM subjects. The ESSP outlines TESS strategies for improving responsiveness as described in Annex 5. They include:

- Strengthen the capacity of colleges of education to implement the aligned teacher education curriculum (STEM, Vocational, Literacy and Numeracy);
- Strengthen teacher preparation (Content knowledge, Pedagogical skills and School experience) and CPD strategies;
- Ensure that teachers are qualified to teach foundational skills in literacy and numeracy in the early grades of primary and ECE;
- Strengthen resource centres to provide short-term in-service and CPD programmes; and
- Improve the capacity and leadership of resource centres in providing ongoing CPD.

Enhanced equity in teacher education

The ESSP acknowledges the role that teachers play in creating a learning environment that promotes equity for all. Teachers are well positioned to be first respondents for learners that disadvantaged on account of gender, poverty and disability. The ESSP therefore aims to sustain a multidimensional

approach to learning. The ESSP particularly seeks to improve leadership in integrating various interests such as guidance and counselling and provision for children with special educational needs in order to improve equity across all sub-sectors.

The specific strategic areas for 'Enhanced Equity in Teacher Education' of TESS are outlined in Annex 5. They include:

- Strengthen the capacities to provide guidance and counselling services for the serving lecturers;
- Strengthen the capacities to provide guidance and counselling services for the serving teachers; and
- Formulate education framework for children with special educational needs.

Enhanced effectiveness of specialized services

The ESSP has recognized the need to improve the capacity of TESS to continuously provide complementary services. Accordingly, the ESSP aims to ensure a methodical and coordinated approach across the different services provided. The ESSP particularly seeks to improve leadership in integrating various interests such as guidance and counselling, provision for children with special educational needs and library services.

The specific strategic areas for enhancing efficiency and effectiveness of TESS are outlined in Annex 5. They include:

- Develop a library service policy framework; and
- Establish a strategy to promote reading culture.

4.8 EDUCATION MANAGEMENT AND GOVERNANCE: KEY STRATEGIC PRIORITY AREAS

Overview

The ESSP has prioritized education management and governance as a strategic area for improving management and support services and enhancing learning outcomes across all sub-sectors. The ESSP will prioritize the following key strategic areas for management and support services to include:

- Strengthening oversight of teaching and learning across education ministries' sub-sectors;
- Strengthening the policy, regulatory and legal environment;
- Devolving and decentralizing education delivery services to lower points of delivery;
- Enhancing all management systems; and
- Removing barriers in education

Strengthen oversight and management of teaching and learning across education ministries sub-sectors

An important strategic interest under the ESSP is to ensure that the management and oversight mechanisms in the education sector are improved to support the attainment of better learning outcomes. The goal is to ensure that various functions are well aligned to support learning, with appropriate accountability mechanisms. Beyond the mechanisms, the goal is to ensure that officers performing oversight functions have the appropriate skills to carry out their work.

Different tiers of supervisory offices (provincial education officers, District Education Board Secretary and head teachers) in the education system still lack leadership and management skills. Because leadership is one of the most critical elements for performance improvement, the ESSP will ensure that officers in oversight positions have appropriate skills. Most staff that rise to supervisory positions have no professional development support and see themselves as a manager or superior and are often detached from the specific instructional issues and professional support of teachers.

Internally, the configuration of the ministries requires resolving. For example, the MoGE is structured with the idea of concentrating support services (Human Resources, Teacher Education, Planning, AMEP and Standards) in technical directorates to serve the needs of sub-sectors (primary and secondary). The only outlier is early childhood education, which operates as a standalone directorate. ECE was established separately to give the sector specialized attention. This decision, however, has brought into question why the other sub-sectors (primary and secondary) should not follow suit. The argument has been that with the integrated arrangement, it is difficult to hold any section accountable for what is happening at the sub-sector level.

The other internal challenge that the ESSP will address is how the different administrative and technical units filter down to the lower levels. Presently, there is a particular challenge of ensuring that there are checks and balances in the functions of offices. Institutionally, this challenge is a result of the MoGE's segregation of duties along managerial and academic lines. This segregation is found at all levels of the education system. At the school level, the head teacher is assigned a management role while the deputy is in charge of learning. At the district level, the District Education Board Secretary (DEBS) is the manager while the District Education Standards Officer (DESO) is head of quality assurance. At the provincial level, the Provincial Educational Officer (PEO) is the manager while the Principal Education Standards Officer (PESO) is head of quality assurance.

At the school level, the ESSP has prioritized strengthening the capacity of head teachers to provide effective oversight of teaching and learning. Globally, evidence shows that head teachers are influential in the running of schools. Schools that do not have strong supervisors suffer teacher absenteeism, poor preparedness and wastage of learning time. Various studies have shown that absenteeism is high in Zambian schools and even the teachers that are present are not always focused on their work. Low contact times in primary education require that every effort is made to ensure that effective teaching and learning is taking place.

This structure has made it difficult for accountability for service delivery. The specific strategic areas to 'strengthen oversight of teaching and learning across education ministries sub-sectors' are outlined in Annex 5. They include:

- Enhance education leadership and management through developing the tool and capacity building;
- Develop teacher professional standards;
- Establish framework for supervision and support at points of education delivery;
- Enhance institutional and teacher monitoring and inspection;
- Delink standards from administration;
- Develop system for teacher education to train teachers based on demand; and
- Establish a memorandum of understanding between general education schools and TEVET institutions on vocational programmes, teachers and facilities.

Strengthening the policy, regulatory and legal environment

The ESSP has prioritized ensuring that education services are delivered within a robust policy, regulatory and legal environment. The goal is to make certain that the education system, and country at large, progressively improve commitments in upholding education as a right for citizens. While the education sector has evolved significantly since independence in 1964, the policy and legal provisions have changed gradually and the two have not always aligned. Therefore, in terms of creating a progressive policy environment for education service delivery, the ESSP recognizes that initiatives of successive governments over the past several decades have created demands on the system that require effective responses.

Policy environment

Since independence, the government has undertaken key policy reforms in 1972, 1977, 1982, and 1996 when the current National Education Policy, *Educating Our Future*, was introduced. While the government has come up with other policy initiatives, *Educating Our Future* remains the overarching policy guide. A key issue under the ESSP regarding the policy making process is ensuring that it is evidence-based. In the past, policy aspirations have been made without thorough vetting evidence-wise. For example, as the country has pushed to implement the free primary education (FPE) policy, the resource provisions have not adequately matched this ambition – making it difficult to honour the commitment.

Additionally, recent policy shifts that have reinstated the primary and secondary school structure have effectively ended the subsidy that primary schools were gaining from being linked to basic schools since the Grades 8 and 9 pupils paid fees. Presently, even as the country remains committed to FPE, primary schools are requiring parents to contribute financially to keep them running as government grants are insufficient. The issue of evidence also extends to the provision of school infrastructure. There are many situations where school infrastructure is taken to locations that do not have the population to justify the provision.

Another important issue for the ESSP regarding the policy environment is working towards consolidation. Given a multiplicity of policy initiatives, the Cabinet Office has directed that sector ministries develop comprehensive policies that cover all aspects. The MoGE is a pertinent example of multiplicity of policy initiatives. These include the School Health and Nutrition (SHN), Re-entry and the Early Childhood Education (ECE) policies. However, in the absence of Cabinet approval, the ministry has relied on guidelines to operationalize policy intentions for ECE, SHN and initiatives such as school feeding. There are also emergent issues; for example, learning institutions called combined schools that have appeared spontaneously without clear guidelines. Adequately resourcing all of these policy commitments, which operate largely in a disjointed way, is challenging for the system.

Legal framework

Beyond the challenges of policy development and implementation is creating a legal and regulatory environment that assures progressive policy actions so that no one is left behind. A progressive legal and regulatory environment is essential for a rights-based approach to education because it ensures that the system secures opportunities for all citizens to access quality education. Thus, compared to the multiplicity of policy provisions, the legal framework has significantly lagged behind. For example, the Education Act has only undergone a substantial revision once, in 2011, repealing the 1966 Education Act. The Education Act of 2011 is now undergoing revision to address the specific needs of general education since Parliament enacted the Higher Education Act of 2013 to address the needs of that sector.

Of primary importance for the legal framework is the requirement that parents and guardians take children to school. While the law does not specifically prescribe compulsory basic education, it does require compulsory school attendance. This requirement includes children enrolled in school and those out of school. The challenge in implementing this aspect of the law is that it is difficult to track attendance and also, importantly, to provide access for all. Accordingly, this ESSP explores opportunities for alternative delivery modes so that the absence of schools physically does not limit opportunities for learning.

Progress in improving the legal and regulatory environment will also help the country to align with international conventions since Zambia has domesticated the Convention on the Rights of Child (CRC). Additionally, updating the Education Act of 2011 will help to assure various aspects of education provisioning, including financing and appropriate allocation of other resources such as teachers to schools. Because government policy initiatives have moved ahead while the legal provisions have lagged behind, it has been difficult for the system to assure organized learning. For example, combined schools are not legally provided for by law. Similarly, while the Education Act of 2011 references free basic education, the policy has reinstated the old structure of primary and secondary education.

A robust legal framework is required to ensure enforcement of important policy initiatives because inadequate accountability mechanisms across the system have undermined the delivery of education services. The contradictions around the principle of free education have also given rise to the growing number of out-of-school children. A clear and supportive legal framework under the ESSP will help to resolve issues including the classification and gazetting of schools, resourcing the free education policy and ensuring that parents and guardians understand that it is a crime to deny children education through wilful neglect, on account of child labour or forcing them into early marriages.

The specific strategic areas for strengthening the policy, regulatory and legal environment are outlined in Annex 5. For policy and legal actions, they include:

- Development of framework for teacher management;
- Reviewing the Education Policy of 1996 (*Educating our Future*) including consolidating various policy initiatives into one as required by Cabinet Office;
- Reviewing the Education Act No. 23 of 2011; and
- Formulating the sector strategic plan.

Enhancing all management systems

The ESSP has a particular urgency in ensuring that the system is able to deliver the efficiency gains from various strategic initiatives developed and implemented over its life. The ESSP is particularly focused on improving policy guidance, coordination and making high-quality information available for decision making. A particular area identified for better decision making is resolving distortions in the allocation of teachers. This is a key challenge across all sub-sectors. Rural areas tend to have fewer teachers if compared with urban areas. Teachers that are deployed to work in rural areas typically move to the urban areas because living conditions are not always suitable. Poor housing leads a lot of young teachers, especially females, to shun working in rural areas.

The specific strategic areas for 'enhancing all management systems' for education delivery services are outlined in Annex 5. They include:

- Improve information management and the use of evidence for decision making;
- Develop comprehensive quality data collection systems on education covering all sub-sectors (especially ECE and AMEP);
- Develop guidelines on the establishment of community and private education institutions (ECE centres; primary schools, secondary schools, colleges, etc.);
- Devise mechanisms for multisectoral collaboration to support education delivery at all levels;
- Develop a mechanism to expand the supply of teachers (especially for ECE and STEM);
- Formulate clear universal financing for all the sub-sectors;
- Strengthen the link between planning and budgeting, particularly by enhancing output-based budgeting;
- Establish frameworks for public financial management capabilities, effective procurement and HR systems and robust institutional leadership development plans;
- Strengthen mechanisms for permanent monitoring of sector performance;
- Strengthen and automate the management information systems;
- Ensure a harmonized expansion of education sub-sectors, through a balanced intra-sectoral allocation;

- Formulate a comprehensive capacity development strategy for education planning and management;
- Review organizational structures so as to have well-defined functions staffing levels and grading;
- Develop strategy to reduce imbalances in the allocation of teachers by gender, rural/urban and sub-sector;
- Develop a mechanism to ensure appropriate-age enrolment in PE;
- A strengthened rewards and sanctions system; and
- Formulate strategy for procuring, distributing and utilizing teaching/learning materials.

Removing barriers in education

A key aspiration of the 7NDP is to ensure that no one is left behind. An important strategic interest under the ESSP is therefore to ensure that barriers to education are removed to enable more citizens to access quality education. The ESSP has identified barriers to education as manifesting themselves in two key ways: First, barriers are in the form of vulnerability of children due to poverty, gender and location. Second, barriers to education come in the form of issues to do with disability.

Accordingly, the ESSP will take an integrated approach to eliminating barriers to education across all sub-sectors to support the attainment of better learning outcomes. The goal is to ensure that appropriate mechanisms with greater accountability are established to better support marginalized groups. Beyond the mechanisms, the goal is to ensure that technical directorates are able to build the capacity of officers and teachers to gain the appropriate skills to address barriers to education.

The specific strategic areas for 'removing barriers in education' are outlined in Annex 5. They include:

- Update the assessment of CSEN in education;
- Integrate CSEN programmes in ECE and AMEP;
- Provision of appropriate water and sanitation facilities in education institutions;
- Devise mechanism to mitigate the growing number of out-of-school children;
- Devise strategy to enhance operations of open community schools;
- Strengthen the home grown school feeding programme in ECE and PE;
- Strengthen mechanisms for delivery of school health services (this also covers HIV and AIDS);
- Construct CSEN user friendly schools and/or provide facilities for children with special educational needs at already existing schools;
- Develop mechanisms for menstrual hygiene management;
- Develop minimum standards for WASH in schools;
- Formulate education framework for children with special educational needs;
- Develop mechanisms to provide guidance and counselling services in all education institutions at all levels; and
- Improve the management of the scholarships and bursary schemes for vulnerable learners.

4.9 UNIVERSITY EDUCATION

Overview

Since Zambia's independence the university education (UE) sub-sector has not grown in tandem with demand. In terms of public investment, UE falls way behind other sub-sectors because of the argument that this level of education is costly and principally produces private benefit. For a country that has a significantly depleted stock of highly qualified citizens due to brain-drain, insufficient supply, and attrition through HIV/AIDS-related deaths, UE has public significance and urgency, especially for natural sciences and other technical fields. For example, given its extractive industry based economy, the country urgently needs to rebuild technical expertise in fields such as geology to be able to ascertain the full extent of its mineral resources. Currently, the country relies disproportionately on private exploration to determine where opportunities for resource exploitation exist.

Even though the UE sub-sector has grown appreciably in recent years with the government expanding access by upgrading colleges to university status and enabling private sector investment, opportunities are still insufficient generally and especially for rural populations. Additionally, the primary growth drivers for private university development are the social sciences, with a small number of institutions providing studies in the field of medicine. As such, the government is unable to influence private universities to offer more technical courses that address national needs. The proliferation of private universities has also raised challenges in terms of ensuring the credibility of services provided – especially from the quality perspective.

On the public university side, the key challenges relate to the limited opportunities for rapid expansion given resource constraints. The insolvency of public universities, given their huge debt obligations, adds a further significant constraint. While recent efforts to explore public–private partnerships in supporting UE hold promise, the challenges the sub-sector faces require alternative approaches to lower the cost of delivering education. This is especially important because young people who come from poor families are unable to afford conventional UE. The recent approach to develop a revolving scholarship fund may help to support more needy students in a sustainable manner.

The ESSP has prioritized improving the delivery of UE by working in the following key strategic areas:

- Enhanced quality of university education;
- Improved access to university education;
- Improved equity in the delivery of university education; and
- Improved efficiency in the management of university education.

Enhanced quality of university education

The ESSP has prioritized improving the quality of UE in public and private learning institutions. A key challenge the UE sub-sector faces is stemming the decline in the quality of graduates produced in all fields. Industry feedback in recent years suggests that the quality of graduates is inadequate. For public universities, quality challenges arise from the fact that curricula offered in the different fields has lagged behind. Under the ESSP, the MoHE will work to ensure that public universities are offering up-to-date curricula. Additionally, there is the longstanding issue of a large number of students enrolling in humanities and social sciences, compared with the small number for natural sciences and technology courses. The MoHE will work with the public universities to ensure a good balance between the social and natural sciences.

The quality challenges for private universities relate principally to the credibility of the learning institutions. Their proliferation has called for effective regulation to ensure quality and protect citizens from unscrupulous people. The MOHE will ensure that regulatory bodies are helping to create an enabling environment that promotes a high-quality university education delivered through private learning institutions.

The specific strategic interventions to enhance the quality of university education under the ESSP are outlined in Annex 5. The key approach identified focuses on:

- Strengthening the regulatory functionalities of the HEA and ZAQA as a way of maintaining and improving quality and credibility;
- Enhancing scientific research capacity in universities;
- Enhancing industry responsive curriculum development and review based on tracer studies and discussion with industry;
- Enhancing the qualifications of lecturing staff in public and private universities; and
- Improving linkages between higher education and research institutions as well as between the institutions and the industries.

Improved access to university education

A key challenge the UE sub-sector faces is the wide gap in the demand and supply of university places. In view of the financial constraints facing the education sector, the UE sub-sector will explore innovative approaches to expanding UE. The MoHE, over the life of the ESSP, will increase courses and further promote private sector investments. The MoHE will also promote alternative approaches to delivering UE.

The specific strategic areas for 'improved access to university education' under the ESSP are outlined in Annex 5. They include:

- Increase numbers on courses in demand in public and private universities;
- Enhance private sector participation in the provision of higher education; and
- Strengthen use of alternative modes in the provision of university education.

Improved equity in the delivery of university education

The ESSP has recognized that UE sub-sector remains a privilege for the few. Accordingly, the ESSP aims to enhance equity in the delivery of UE. The specific strategic areas for 'improved equity in the delivery of university education' are outlined in Annex 5. They include:

- Enhancing the loans and bursary scheme to support students, especially those that are vulnerable or from disadvantaged groups; and
- Linking vulnerable students to private sponsorship initiatives.

Improved efficiency in the delivery of university education

The ESSP has recognized that efficiency gains in the university education sub-sector will help to achieve the goals set out in the 7NDP. The specific strategic areas for 'Improved Efficiency in the Delivery of UE' are outlined in Annex 5. They include:

- Create an enabling environment for innovative ways of funding universities;
- Improve the management information system (MIS) on university education;
- Create a financial simulation model for university education; and
- Expand opportunities for public-private partnerships in university education.

4.10 TEVET

Overview

The TEVET sub-sector remains a conundrum for the country. Although the construction sector that has grown steadily over the past two decades, Zambia still has a shortage of people with trade skills in areas such as bricklaying, carpentry, plumbing and tiling. Most people that undertake these skills often learn by doing and are not certified to undertake the work. While the government has made significant investments across the country to improve access to TEVET, the demand side remains a challenge. Adding to the challenge, trade schools have in the past two decades rolled over their skills training programmes to focus on academic subjects where the demand is high.

Additionally, even though the TEVET sub-sector has significant potential for growth, negative attitudes towards trade skills mean that demand will continue to be challenge. Accordingly, the government introduced the vocational pathway in the new curriculum to try and stimulate demand at the secondary school level. However, inadequate facilities and teachers without trade skills have made implementation challenging. Furthermore, private actors have not taken to providing TEVET courses because of a lack of demand.

While recent efforts to explore PPPs in supporting TEVET hold promise, the challenges the sub-sector faces require fresh ideas. This is especially because the benefits of trades training are inclined toward private appropriation. Initiatives such as apprenticeships may therefore work more effectively than formal training in addressing issues of demand for TEVET.

The ESSP has prioritized improving the delivery of TEVET by working on the following key strategic areas:

- Improved demand for TEVET;
- Improved access to TEVET;
- Improved equity in the delivery of TEVET; and
- Improved efficiency in the management of TEVET.

Improved demand for TEVET

A key challenge the TEVET sub-sector faces is the wide gap in the supply and demand of services provided. While the government has made significant investments countrywide to try and encourage improved enrolments in TEVET institutions, this has failed to attract large numbers in the absence of initiatives such as providing scholarships. The biggest challenge is that, society-wide, trade skills such as carpentry and bricklaying are looked down upon as inferior learning areas. This is despite the fact that the country's construction sector has flourished in recent years. Shortages of trade skills such as plumbing and tiling has led some contractors to import labour from countries such as Zimbabwe and China to do the work.

Weak demand for TEVET also stems from a disconnect between industry and trade schools. The MoHE recently developed an MOU to encourage a connection, through internship arrangements, between the training institutions and industry. Some industries, particularly those engaged in mining, have also developed specific initiatives for on-the-job apprenticeships to directly link trainees to prospective jobs. Credentialism has, however, played its part in dampening demand for TEVET as academic excellence decides who is admitted to training programmes. Over the years, diminished government funding to trade schools has led them to replace skills training with academic subjects which generate income for the learning institutions.

The ESSP outlines strategies to 'Improved demand for TEVET education' as described in Annex 5. They include:

- Increase the number of graduates on courses demanded by industry;
- Enhance private sector participation in the provision of skills training; and
- Strengthen the use of alternative modes in the provision of TEVET.

Enhanced quality of TEVET

The ESSP has prioritized improving the quality of TEVET institutions. The quality challenges for private TEVET relate principally to a curriculum that is not aligned with industry demands. Additionally, the lecturers' skills are not updated to meet instructional requirements. The MOHE will ensure that an enabling environment for high-quality TEVET is delivered through public and private learning institutions.

The specific strategic interventions to enhance the quality of TEVET education under the ESSP are outlined in Annex 5. The key approach identified focuses on:

- Enhancing the capacity of training institutions;
- Enhancing industry responsive curriculum development and review based on tracer studies and discussion with industry; and
- Enhancing the qualifications of lecturing staff.

Improved equity in the delivery of TEVET

The ESSP has recognized that TEVET sub-sector requires boosting to meet the country demand for trade skills. Accordingly, the ESSP aims to opportunities for enhancing equity in the delivery of TEVET. The specific strategic interventions for 'Improved Equity in the delivery of TEVET Education' are outlined in Annex 5. They include:

- Enhancing the TEVET bursary scheme to support learners who are vulnerable or from disadvantaged groups; and
- Linking vulnerable students to private sponsorship initiatives.

Improved efficiency in the delivery of TEVET

The ESSP has recognized that efficiency gains in the TEVET sub-sector will help to achieve the goals set out in the 7NDP. The specific strategic interventions for 'Improved Efficiency in the Delivery of TEVET' are outlined in Annex 5. They include:

- Strengthen the regulatory functionalities of TEVETA as a way of maintaining and improving quality and credibility;
- Operationalize the Skills Development Fund;
- Improve the management information system on skills development;
- Create a financial simulation model for TEVET;
- Improve linkages between skills training institutions and industry; and
- Enhance vocational pathway to optimize the linkage between secondary education and TEVET.

MONITORING & EVALUATION FRAMEWORK

5



5. MONITORING AND EVALUATION FRAMEWORK

5.1 OVERVIEW

The ESSP's monitoring and evaluation (M&E) framework is informed by the global education discourse given the agenda expounded under SDG4. The M&E framework is also linked to the 7NDP with the explicit purpose of contributing to the attainment of national development goals. The 7NDP, particularly, takes an integrated approach to ensure that there is complementarity across the work undertaken by various social and economic sectors. Accordingly, this quest to address a broader context requires new efforts towards measuring progress made in the education sector. It includes addressing the diverse nature of education challenges that encompass varying aspects addressing early childhood education, primary, secondary, higher and education, quality, gender, adult education, youth and skills (TEVET and AMEP), governance, and equity issues (gender, poverty and disability).

As illustrated in the theory of change, the ESSP foresees the funding of activities that produce a number of outputs which, in turn, trigger various pathways of change towards expected outcomes in the areas of access, quality, equity and efficiency in the education system. As the targets and expected results are achieved at each level, the ESSP will be seen to have contributed to an overall impact, namely 'quality and relevant lifelong education for all'.

This M&E framework provides the means to monitor and evaluate progress towards the achievement of the targets at all levels. It sets out an approach that balances information needs on ESSP progress and the actual ability to retrieve this information in the Zambian context. In addition, the M&E framework incorporates the new reporting requirements from both SDG4 and the 7NDP.

Implementation of the ESSP will be subject to M&E exercises at regular intervals. In this context, *Monitoring* refers to the collection of routine data to measure progress towards the ESSP's objectives. Monitoring is especially important for tracking the ESSP's performance over time and, through effective monitoring, this framework will support stakeholders to make informed discussions regarding the effectiveness of the ESSP and the efficient use of resources therein. *Evaluation* is intended to assess how well the ESSP is performing in meeting its expected objectives, and the extent to which the outcomes may be associated to the activities of the ESSP.

When developing the M&E framework, the following guiding principles have been taken into account:

- **Feasibility:** The process, objectives, and outputs of the M&E framework are reliable and realistically achievable. Proposed indicators are SMART (Specific, Measurable, Achievable, Realistic, Time Bound) and the process is based on existing M&E capacities;
- **Stability:** The process, results framework and information sources should be, and have been, identified following a participatory approach. They must be retained and maintained over time to allow for a proper and informative assessment of trends in education;
- **Transparency:** Information on education progress must, and will be, shared among other GRZ stakeholders, cooperating partners, relevant regional and international bodies as well as the wider public according to agreed procedures. Statistical information should be released in a timely manner and communicated broadly;
- **Accountability:** Responsibilities in implementation and reporting of activities and programmes must, and will, be clearly established. The levels of information expected are precisely defined through consistent ways of reporting;
- **Utility:** The M&E framework should, and will, produce the solid management information and data required to oversee implementation of the ESSP, to track the achievement of results, and – if necessary – to adjust implementation pathways.

The ESSP will build on the growing interest by the government in holding officials accountable via tools such as results-based management (RBM) and balanced score cards (BSC). These initiatives, which point to political will on the part of government, are critical in the absence of legal frameworks that require the personnel concerned to produce reliable evidence.

This section therefore elaborates on the existing arrangements for monitoring, including stakeholders, and identifying data sources. In addition, the framework explores the possibilities to conduct evaluations for measuring higher-level objectives of the ESSP and to assess the multiple policy initiatives as foreseen by the ESSP. The section also includes the results framework with indicators and the outline of an M&E work plan for the ESSP.

5.2 OUTLINE OF M&E IN THE EDUCATION SECTOR

M&E in the education sector in Zambia is characterized by a variety of arrangements (i.e., a multitude of data collection methods for a wide range of stakeholders, which produce information on the implementation of education policies and programmes as well as whether education sector objectives are being achieved), including the different arrangements that currently support planning, budgeting, management and communication activities of both MoGE and MoHE.

M&E information is used by a diffuse and diverse group of stakeholders in the education sector. These stakeholders include:

- Within the MoGE, the DPI is the key coordinating actor in the M&E field, but all MoGE Directorates have a role to play in terms of both generating and using M&E data;
- Within the MoHE, the Department of Planning is the key point of engagement, although here too other departments have an important role to play;
- Universities such as UNZA are another key stakeholder group given their expertise in the M&E field and ability to supply research services to the MoGE and its affiliates;
- The MoF, Cabinet Office and MoNDP are all key stakeholders in M&E given their active engagement in broader GRZ-wide initiatives to strengthen M&E structures, systems and capacities;
- External cooperating partners are also involved in the M&E process through various current and planned projects and have an important broader role to play insofar as they require M&E systems to be developed as preconditions for their financial support;
- NGOs and civil society organizations are important ‘consumers’ of M&E information and also provide skilled M&E expertise into the labour market.

Multiple forums have been established to support M&E within the education sector in which these stakeholders participate. Table 5.1 provides a brief description of each of these forums, the composition and membership, and indicates the frequency of meetings.

Table 5.1. The institutional composition of M&E: forums and stakeholders

Forum	Composition	Frequency
Within the MoGE, the Policy and Implementation Technical Committee (PITC) is the supreme dialogue structure with responsibility to implement policy & approve MoGE work plan and budget, indicators & performance.	<ul style="list-style-type: none"> • All MoGE Directors • CPs • Civil society organizations (CSOs) 	Quarterly
The Monitoring And Evaluation Technical Committee (METC) is responsible for providing guidance for M&E and plays an important role in helping to organize the Joint Annual Review (JAR). The METC will monitor implementation progress of the ESSP.	<ul style="list-style-type: none"> • CPs • CSOs • Officers at Chief level from each Directorate at MoGE & MoHE 	Quarterly
Within the MoGE, key projects in the education sector are synergized through the Projects Coordinating Committee (PCC) .	<ul style="list-style-type: none"> • CSOs • DPI from MoGE 	Once per month (Jan–Nov)
The JAR is an important, high-profile annual exercise involving external stakeholders to assess the previous year’s performance in the sector. Each JAR has a specific topic and involves significant fieldwork across Zambia.	<ul style="list-style-type: none"> • All MoGE Directorates and Units • CPs and CSOs • Other line ministries including MoHE 	Annual (May–June)

5.3 MONITORING THE ESSP

Data sources for monitoring

Although reference is made to a single Education Management and Information System (EMIS), there is currently no single, integrated data collection system for monitoring the education sector. Most notably, data collection systems are split between the MoGE and MoHE. The systems currently in place, which operate separately, include:

- ✓ School EMIS database (Ed*Assist);
- ✓ Student Loan/Bursary Management System;
- ✓ ECZ's own MIS;
- ✓ TEVETA's own MIS.

The MoGE has the most established EMIS, which is the country's main source of education data for planning and budgeting purposes. The EMIS is managed by the Directorate of Planning and Information (DPI) and mainly relates to ECE, primary, and secondary education, and teacher education (in those components that fall under the mandate of the MoGE). The basis for the principal EMIS system is the largely paper-based school census (ASC) which provides data on a yearly basis. EMIS data are published annually in the Ministry's ESB. CSO, demographic and financial data is entered into the school EMIS database, supplementing the information collected from the ASC.

Whereas the ASC covers a multitude of topics across the different sub-sectors, the MoGE directorates also have their own instruments in place that allow for monitoring specific topics at regular intervals. These instruments include two other censuses, one for the ECE Directorate (Annual ECE Census) and another for DoDE (Annual ODL Census).

In addition, the TESS Directorate has assorted monitoring instruments on teacher training (pre-service training, teaching practice, and CPD) and teachers' delivery of lessons (implementation of lesson plans, teaching materials) as well as performance of school administrative staff and teachers.

The Directorate of Standards and Curriculum, moreover, has developed the National Assessment Survey (NAS), which it plans to undertake biannually, as well as various instruments to monitor staff and institutions and instruments to monitor examinations that are linked to different evaluation schedules (e.g., GSC and Grade 7, 9 and 12 exams).

Other instruments cover monitoring in the field of TEVET and university education. These fall under the responsibility of the MoHE. Each year TEVETA publishes an annual report with key information on TEVET institutions, curricula, qualifications and examinations as well as financial figures on the basis of its MIS. Early in the lifespan of this ESSP, TEVETA will launch a new TEVET information management system that is supported by UNESCO. The system is web-based and directly linked to all TEVET institutions.

The MoHE also has a bursary management system that is managed by the Bursaries Committee to manage student loans for tertiary students. Finally, the MoHE undertakes an annual survey among private universities to retrieve key data on enrolments, for example.

Strengthening monitoring capacity

There is currently little coordination between the various data sources, and these sources do not consistently produce timely and solid information that can be used for policy and management purposes. The education ministries – as well as GRZ in a broader context – have embarked on various initiatives to strengthen M&E. Measures to improve M&E within the sector include the following:

- ✓ A re-launch of the Data Management Committee (DMC) at the HQ, Provincial and District levels;
- ✓ Improvements in the MoGE's EMIS architecture such as the harmonization of data collection tools;

- ✓ A national M&E Policy (NMEP) to strengthen the role of reporting against development objectives by ministries;
- ✓ TEVETA's new web-based TEVET information management system; and
- ✓ An M&E capacity building programme within the MoGE undertaken in partnership with UNZA.

These measures also need to be set against the backdrop of a number of GRZ-wide initiatives to improve M&E and overall results-based management. These include the launch of the 7NDP National Performance Frameworks (NPF) and associated Sector Performance Frameworks (SPF) and the forthcoming National M&E Policy (NMEP), all of which are intended to strengthen the role of reporting against development objectives within line ministries, including the MoGE and MoHE.

As Zambia moves towards decentralization of the education system, the ESSP's M&E approach will need to be responsive to the regional, district, and school authorities. In other words, it is important to align the ESSP's monitoring systems with decentralization efforts to strengthen the management of education reforms. This is especially critical given the focus on accountability for learning outcomes and performance- or results-based monitoring. This includes aligning EMIS, TEVET MIS, learning assessments and school monitoring to meet the new demands that emphasize assessing performance rather than simple compliance-based monitoring.

Finally, an effective M&E will help to assure the success of the ESSP. A key part of achieving effectiveness is recognizing that M&E should be regarded as a living and long-term effort which requires a strategic learning approach from the outset. The active or living side of M&E includes sustaining demand for evidence-based decision making, clarifying roles and responsibilities, producing trustworthy and credible information, ensuring accountability, creating the right incentives, learning from best practices and building capacity for sustained engagement.

Over the course of the ESSP, the rollout of these measures is also expected to improve monitoring, evaluating and reporting of progress towards the ESSP objectives.

5.4 EVALUATION

The NIF III was supposed to be evaluated. Despite initial plans, neither a mid-term or a final evaluation was conducted to inform onward planning and target setting, and this was seen as a critical weakness in the functionality and utility of the NIF III and efforts to monitor and evaluate its effectiveness as a sector planning tool.

For the ESSP a mid-term review and a final evaluation are foreseen. Both evaluations will contain specific, targeted and actionable recommendations, in particular on those (outcome and impact) indicators that are not suitable for monitoring because they cover longer periods of time and are more complex by nature. These evaluations will require supervision by the Monitoring and Evaluation Technical Committee and require funding from the ministries, hence they will be included in the appropriate AWPBs, in 2020 and 2021 respectively. These evaluations will be integrated into broader initiatives on M&E currently underway. For instance, the pending NMEP will require the ministries to develop evaluation plans, whereas a sector performance framework associated with the 7NDP also needs to be developed. In addition, GRZ has committed itself to reporting on progress towards SDG4 targets at outcome level. These broader activities create momentum for organizing and conducting evaluations of progress against all targets that the MoGE and MoHE have included in the ESSP, and can add value to the ESSP M&E Framework.

In addition, the ESSP foresees the development of multiple strategies and policies, e.g., on financing universal ECE and secondary education, which require an evaluation to assess whether they are relevant and effective. It is proposed that the strategies and policies, which are frontloaded in the ESSP implementation period, will be assessed in the mid-term review. Conducting the mid-term review will coincide with the Joint Annual Review in June 2020.

A final assessment of progress produced towards the ESSP objectives will be undertaken through a final evaluation at the end of the ESSP implementation period in 2021. The results of both evaluations and the lessons they draw out will subsequently feed the development of the next ESSP. Overall, the ESSP's M&E approach is designed to be pragmatic and focused on organizational learning.

5.5 RESULTS FRAMEWORK

This results framework presents a limited number of indicators against which progress towards ESSP objectives can be measured. These indicators have been selected purposively, i.e., they are most suitable for monitoring and evaluating the ESSP. Non-strategic indicators have deliberately been left out of the results framework since they can be measured easily with system data produced by existing instruments. The selected indicators, furthermore, require information on, for example, learning outcomes that should be collected via M&E. The selection of indicators is also based on their utility for the policy process and accountability over resources. Also, the selection has been brought in line with indicators included in the 7NDP IP and SDG4 indicators. Finally, the selection builds on the SADC protocol on education and training as well as on the implications for M&E of the 2014 GRZ pledge to the Global Partnership for Education.

Monitoring occurs at several levels in a hierarchy of significance and follows a logical sequence where activities produce outputs that contribute to (or cause) outcomes which have a defined impact. However, as discussed in previous chapters, it is conceptually and analytically difficult to attribute direct causality to educational outcomes (especially cognitive learning).

The ESSP's results framework (Figure 2.2) provides an overview of the relationships between activity areas and expected results and outcomes. With the high impact outcome focused on improving learning for all, the key intermediate results revolve around the themes of access, quality, equity and efficiency. Table 5.2 provides the detailed M&E framework with strategic objectives, key interventions, indicators, baselines and targets. Also, the Implementation Plan in Annex 3 provides output and outcome indicators for all of the activities proposed under this ESSP.

The key indicators for the ESSP are presented in Table 5.2. These indicators have been selected from the larger pool of indicators (Annex 3 and Annex 6) in order to provide a SMART (Specific, Measurable, Achievable, Realistic, Time Bound) approach to monitoring the plan, with an accent on the specific, measurable, achievable and realistic.

5.6 MONITORING, THE JOINT ANNUAL REVIEWS AND ANNUAL WORK PLANS AND BUDGETS

The JARs will play a pivotal role in the reporting of the indicators. These reviews will take place every year for presentation of the indicators and critical, analytical discussions on the significance of progress made or lack thereof. In other words, the JARs will be a major forum for feedback on the state of the educational system with the active participation of all major stakeholders.

Other than the JAR, the annual work plans and budgets (AWPB) are documents that use monitoring results as a basis for elaborating work/implementation plans and budgets on the basis of (i) the overall orientation of the ESSP in general, and its IP in particular (see Annex 3, and (ii) the results of and lessons learned from ESSP monitoring (see Table 5.2.).

Within the strategic approach of the ministries, as set forth in this ESSP, the AWPBs will identify a coherent set of activities that will be agreed upon with key stakeholders, which are in line with the ministries mandates and what they want to achieve. The AWPB will, of course, also be in line with the work, priorities and principles of the education sector in general, as presented in this ESSP.

Thus, each activity/element should contribute to the aim of the work plan and the accomplishments of the work plan as a whole should contribute to the macro purpose of the ministries. The different activities of a work plan have to contribute to achieve the objective of the work plan as a whole and have to be interconnected in order to realize the aspirations and vision of the ministry. This is so because the annual work plan provides a concise, easy to review overview of the ministry's expected activities and outcomes for a one-year period in that it clearly identifies specific actions and steps that will lead to the ministry's desired outcomes. In addition, it also serves as a roadmap to keep all stakeholders focused and on track with implementation of targeted activities, thereby helping the Ministry to communicate what it is are doing, and why it is important. The AWPB, with its clearly identified outcomes/deliverables, can be used as a tool or justification for funding.

Table 5.2. Key monitoring indicators

Strategic objective	Indicator	Baseline 2016	Target	Data source	Timing	Responsibility	Remarks
OVERALL IMPACT							
1	Quality & relevant lifelong education & skills training for all To be determined by a final evaluation that will analyse the progress of the education system's capacities for attaining this global strategic objective and inform the subsequent ESSP.				2021	METC, PETC	
OUTCOMES							
2	Grade 2 reading			EGRA			
3	Grade 2 mathematics			EGMA		MoGE Dir. Standards & Curriculum; DPI	
4	% G-5 at min. proficiency: reading	47.8%	60%		Biannual		
5	% G-5 at min. proficiency: maths	36.7%	60%				
6	% G-9 at min. proficiency: reading	38.8%	50%	NAS			
7	% G-9 at min. proficiency: maths	31.6%	40%				
8	% G-1 pupils with ECE experience	30%	50%	EMIS, ECE			DECE, DPI
9	% TEVET students graduating in STEM	20%	35%				
10	% university students graduating in STEM	23%	40%				
11	ECE NER	14%	50%	ECE, EMIS		DECE, DPI	
12	G-1 NER increases	48%	90%				Net rates also capture the extent of over/under-age enrolment, especially in Grade 1
13	Primary school (G 1-7) NER	90%	100%				
14	Secondary school (G 8-10) NER	47%	67%		Annual	DPI	
15	Secondary school (G 11-12) NER	38%	60%				
16	GPI, Secondary school	0.86	0.92%	EMIS			
17	GPI, TEVET	0.76	0.86			MoHE	GPI, Primary = 1
18	GPI, Public universities	0.75	0.80				Baseline: 2014
19	Primary school years per graduate	9.4	8				
20	Secondary school years per graduate	8.3	6.5			DPI	
INTERMEDIARY OUTCOMES							
21	Primary school repetition rate	6.7%	3%				
22	Transition rate: G 7-8	66.2%	100%				
23	Transition rate: G 9-10	46.6%	55%				
24	Primary school completion rate	92.4%	100%				
25	Grade 9 completion rate	68.8%	90%				
26	Grade 12 completion rate	52.7%	60%	EMIS	Annual	DPI	
27	Primary PTR	42.3	40: G 1-4 35: G 5-7				
28	Secondary PTR, G 8-9	46.6	38				
29	Secondary PTR, G 10-12	35	35				
30	Pupil-teacher contact time (hours/day): primary school	4.5	4.9				
31	Pupil-teacher contact time (hours/day): secondary school	6.5	7.0				
32	G 9 teacher scores on NAS	Eng: 73.9% Maths: 56.8% Science: 74.5%	100% for all subjects	NAS	5yrs	Standards	
33	PTR degree of randomness: non-private primary	0.38	0.19				
34	PTR degree of randomness: non-private secondary	0.52	0.26	EMIS	Annual	DPI	

OUTPUTS

Sub-sector	Indicator	Baseline 2016	Target	Data source	Timing	Responsibility	Remarks
35	Number of classrooms	1,849	7,348		Annual		
36	Number of centres in which school readiness assessment is applied	0	7,348				
37	Number of centres with school feeding	0	7,348	ECE/EMIS		DPI/ECE	
38	Financing strategy in place	no	Yes		2019		
39	Integrate data collection into EMIS	no	Yes		2019		
40	Number of out-of-school children	575,543	235,100	DHS	3yrs	CSO	
41	Implementation of NAF	0	All schools	STDS	Annual	STDS	
42	Number of Head teachers trained on ZEMAT (ZEMT)	0	All	TESS	Annual	TESS	
43	Number of schools with school feeding	2,591	All	EMIS	Annual		
44	Number of schools with adequate WASH facilities	2,591	All		Annual	DPI	
45	Financing strategy in place	No	yes	DPI	2019	DPI	
46	Number of classrooms	48,414	77,000	EMIS	Annual	DPI	
47	Implementation of NAF	0	All	STDS	Annual	STDS	
48	Number of Head teachers trained on ZEMAT (ZEMT)	300	All	TESS	Annual	TESS	
49	Financing strategy in place	no	Yes		2019	DPI	
50	Number of classrooms	10,938	27,000			DPI	
51	Number of STEM teachers trained	10,000	15,000	TESS		TESS	
52	Number of teachers trained in CSE	60,000	All	STDS		STDS	
53	Implementation of NAF	0	20%	DAMEP/STDS		DAMEP/STDS	
54	Number of curricula reviewed or developed	100	300	Surveys & Annual Reports		MoHE, TEVETA, Universities, HEA, ZAQA	
55	Number of bursaries/loans for students from vulnerable or disadvantaged groups studying in:	19,598	189,598		Annual	MoHE	Target assumes all students in public universities have access to loans
56	- University (loans)			Annual Reports		HELSB, HEA	
57	- TEVET	2,784	15,000			MoHE	
58	Number of TEVET institutions linked to secondary schools	4	18	Surveys & Annual Reports		TEVETA	

FINANCING THE IMPLEMENTATION OF THE ESSP 6



6. FINANCING THE IMPLEMENTATION OF THE ESSP

According to the output-based budget, the MoGE approved budget for 2015 was ZMW9.4 billion. In 2016, the approved budget reduced to ZMW8.0 billion and rose again in 2017 to ZMW9.2 billion.

The relative budget allocation by economic classification shows a similar picture over the years. The larger part of the budget was allocated for primary education (in 2016 that was ZMW6.7 billion, or 85 per cent). Capital expenditures followed with a budget of ZMW700 million, or 6.9 per cent. Transfers and other payments (including bursaries and school grants) had a share of 4.7 per cent of the overall budget (321 million) and ZMW240 million (3.3 per cent) was reserved for general operations of the ministry. This included (all heads, deputies, heads of departments and senior teachers for the 9,500 schools) the provision of teacher training and TLMs.

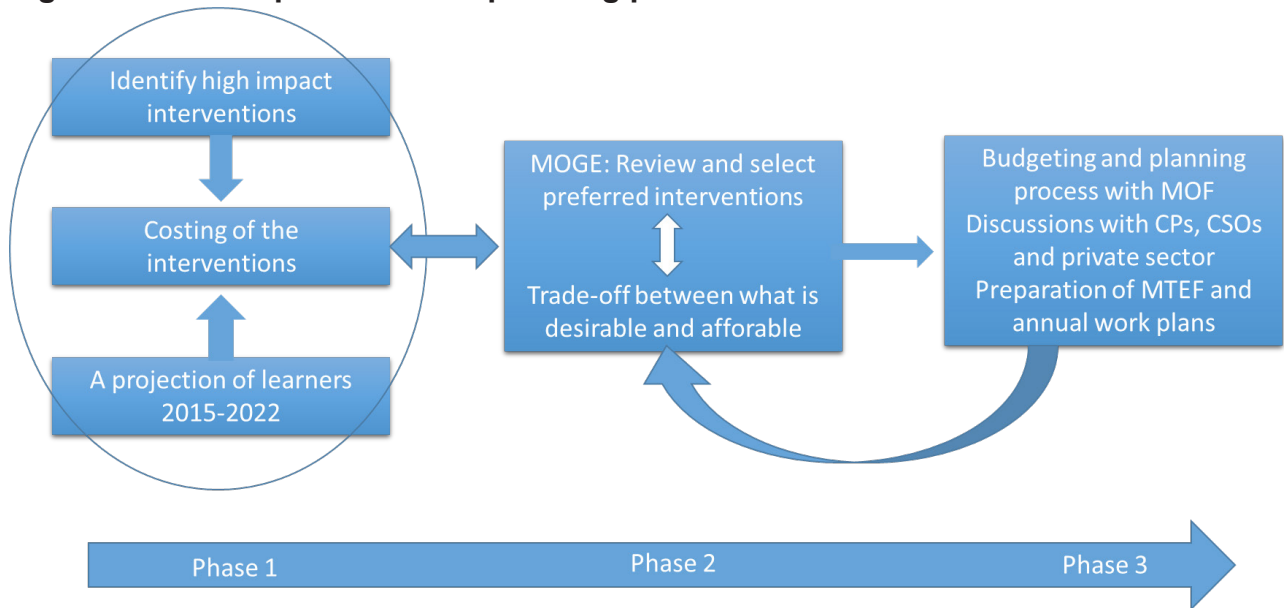
While the contributions of cooperating partners (CPs) to the budget declined to 2 per cent of the overall education budget in 2016, there were various CPs, NGOs and civil society organizations supporting the education sector under a project support modality that was not included in the GRZ budget, although indications were that this also declined. Coupled with general economic decline in the 2014 to 2016 period, there was a significant reduction in general education investments resulting in stalling and complete suspension of both capital and non-capital investment programmes. Notable in this regard was the suspension of infrastructure programmes especially for ECE constructions that could not take off. For primary and secondary school infrastructure programmes, the challenge of resources led to protracted delays in the completion of projects. Equally, other critical programme activities could not take off because of financial constraints. The situation became dire in 2017/2018 as sector and direct budget support were both withheld by some CPs.

Educating a nation is an extremely expensive undertaking that requires participation of the private sector and the CPs, hence the funding to education will still be a challenge during the ESSP period as there is so far no commitment from the CPs on how much resources they are pledging to the sector during the ESSP. The government needs to put in place mitigation measures to address this scenario.

6.1 THE ESSP FINANCIAL PROJECTION MODEL

The ESSP projection model is an integral part of the education sector Strategic Plan 2017–2021. The model, however, covers only the MoGE parts of overall education. At present, there is no model for the MoHE parts of the sector (universities and TEVET); construction of such a model is an activity in this ESSP's Implementation Plan. The MoGE model aims to give a better understanding of the required resources to reach the MoGE-specific objectives of the ESSP and how these relate to the expected available resources. By calculating the financial implications of the policy priorities and strategic interventions the model has helped to set realistic targets for the implementation period of the ESSP.

The projection model has been used as an input in the overall planning process of the ministries. The planning process can be split in three different phases as depicted in Figure 6.1. The focus of the projection model is limited to phases one and two in the figure and concentrates on the interventions in the ECE, primary and secondary sub-sectors.

Figure 6.1. Three phases in the planning process

Two main variables determine the capacity of MoGE to implement the ESSP as planned:

- i.) The total number of learners; and
- ii.) The total resource envelope.

The model is a bottom-up demographic model, with outcome targets as starting point. The model projects the required resources to achieve the ESSP outcome targets while taking the expected population growth into account.

The model consists of two components:

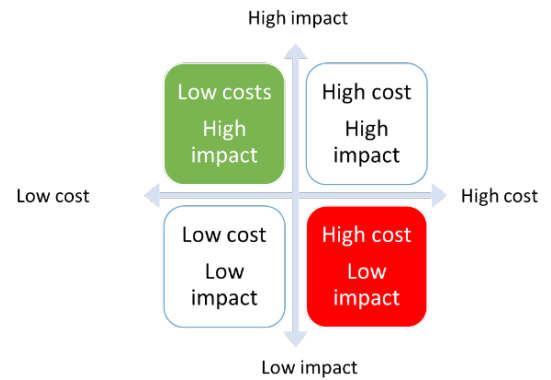
- i.) a projection model of the number of learners; and
- ii.) a financing model containing assumptions on the available government budget for education and unit costs.

The model uses low, medium and high scenarios for both population growth and financial projections. A full list of assumptions for the ESSP projection model can be found in Annex 7.

The ESSP projection model **should not be understood as a budget**. A cost projection model that attempted to take into account five years of detailed activity planning would be unnecessarily complicated, and would quickly become irrelevant as specific activities are changed in the light of circumstances. The model therefore focuses on the main cost drivers of the sector:

- 1 PE:
 - Teacher remuneration.
- 2 Non PE costs:
 - Teaching and learning materials;
 - School grants;
 - Bursaries;
 - School feeding programme;
 - ODL and youth and adult literacy.
- 3 Capital expenditures;
- 4 Management and support services.

It is important to ensure that the cost projections are understood as just that – estimates of overall projected costs, and not a budget for the five-year planning period. The only budget that should be part of the planning cycle is the AWPB, located within the framework of the Medium-Term Expenditure Framework. The model attempts to project the key cost drivers as input for the annual budgeting process. The model has a longer timeline than the ESSP and can therefore also be used for longer-term planning.



The fact that the model only focuses on those ESSP policy ambitions that have substantial financial implications (which are mostly interventions in the domain of improved access), does not mean that other policy ambitions are less relevant. On the contrary, at this stage with limited resources available, the sector will benefit most from efficiency and quality improvement measures. Solving the mismatch between learning areas and supply of teachers (with fewer teachers being trained in STEM subjects while there is an oversupply of teachers in social sciences) is a good example of an efficiency measure that is not captured in the model, but which will have a high impact on learning. This policy measure can be considered a relatively low-cost option as this replacement will not directly affect the overall teacher payroll. A similar case can be made for other relatively low-cost interventions, such as curriculum development. Removing repetition in primary education could save the ministry some resources of its primary education budget as repetition implies that the government is spending twice on those that repeated the grades.

The ESSP aims to put the accent on low-cost/high-impact interventions. These interventions are the so-called 'quick-wins', but high-cost interventions are also necessary for the continuation of the sector and that which is captured by the projection model.

The model uses a simplified structure and is designed to run alternative scenarios beyond the ones presented in this report. It should be noted that while the MoGE has an extensive set of data at its disposal, both the projection model and the financial model are weakened by some uncertainties in the underlying data and assumptions, leaving a considerable margin for error.

6.2 ENROLMENT PROJECTIONS

Demographic growth is one of the key parameters for the projection of number of learners. The model assumes an annual growth of 2.9 per cent to 3.1 per cent in the different scenarios. Other important parameters to project the number of learners in school are the transition rates and the absorption capacity of the schools to reduce the number of out-of-school children. Table 6.1 shows the main assumptions that were used to calculate enrolments.

According to baseline figures from 2015, there were approximately 4.5 million learners in school (ECE, primary and secondary). Out of these, there were approximately 3.3 million learners in GRZ and grant aided (GA) schools. As shown in Table 6.2, the model projects that by 2022 there will be between 4.6 million (low case scenario) and 5.1 million learners (high case scenario) in GRZ and GA schools.

Table 6.1. Key parameters for enrolment projection model for low, medium and high case scenarios

Enrolment projections	2015	2022		
	Baseline*	Low	Medium	High
Population growth	2.9%	2.9%	3.0%	3.1%
ECE				
% of G1 with ECE experience	24.4%			
5-6 year old in ECE	12.1%	18.0%	25.0%	25.0%
Enrolment in GRZ ECE	54%	55%	57%	60%
Primary				
% of 7 years old not in Grade 1	49%	45%	40%	35%
Enrolment in GRZ/GA	78%	79%	80%	82.5%
Secondary				
Grade 8-9				
Transition rate Grade 7 to 8	64.5%	65.0%	70.0%	100.0%
Enrolment in GRZ/GA	89.6%	89.3%	88.0%	87.0%
Grade 10-12				
Transition rate Grade 9 to 10	42.2%	50.0%	55.0%	60.0%
Enrolment in GRZ/GA	88.0%	87.0%	86.0%	85.0%

Table 6.2. Baseline and projected enrolments in GRZ/GA schools

	Total enrolment	GRZ/GA schools	GRZ/GA schools				
			2018	2019	2020	2021	2022
Low case	2015 baseline		2018	2019	2020	2021	2022
ECE	120,930	65,302	89,501	98,413	107,806	117,699	131,482
Primary	3,571,517	2,495,834	2,806,129	2,885,919	2,956,846	3,046,189	3,129,238
Secondary	802,341	713,512	1,011,687	1,119,139	1,204,713	1,259,458	1,324,900
Total	4,494,787	3,274,648	3,907,317	4,103,472	4,269,365	4,423,346	4,585,620
Medium case	2015 baseline		2018	2019	2020	2021	2022
ECE	120,930	65,302	112,421	130,326	149,465	169,911	183,925
Primary	3,571,517	2,495,834	2,814,595	2,911,076	2,999,667	3,108,538	3,207,466
Secondary	802,341	713,512	1,017,842	1,137,135	1,237,160	1,315,971	1,403,929
Total	4,494,787	3,274,648	3,944,858	4,178,536	4,386,292	4,594,420	4,795,321
High case	2015 baseline		2018	2019	2020	2021	2022
ECE	120,930	65,302	115,544	135,156	156,396	179,377	203,062
Primary	3,571,517	2,495,834	2,857,991	2,979,411	3,094,139	3,232,518	3,344,685
Secondary	802,341	713,512	1,034,262	1,169,873	1,288,943	1,396,820	1,517,802
Total	4,494,787	3,274,648	4,007,797	4,284,440	4,539,478	4,808,715	5,065,549

Early childhood education

One of the key ambitions of the MoGE is to increase the proportion of Grade 1 entrants with pre-school experience. According to the 2015 baseline, 24.4 per cent of this age group (65,302 learners) were enrolled in ECE in 2015. The policy objective of the 7NDP is that 50 per cent of Grade 1 entrants will have ECE experience by 2022.

To correct for out-of-school children, the model has taken the whole age group of five- and six-year-olds from the medium scenario of the CSO Census report (census of population and housing, Population and Demographic Projections, 2011–2035). This report estimates that there were about 1 million five- and six-year-olds in 2015.

This would imply that approximately 12 per cent of the total age group is currently in ECE. In line with the policy goals of the ESSP, the model assumes a steady increase in enrolment in ECE. Even in the low case scenario, the total enrolment in GRZ/GA ECE centres is expected to double over the period 2015–2022 from 65,302 to 131,482. In the high case scenario it is even expected to rise to 203,062.

Primary education

There is continuous pressure on school infrastructure to enable all children to have access to school. In order to meet these expectations, most schools use double shifts, and some use triple shifts. This is a factor in the reduction of the number of contact hours between teachers and students. The official age for Grade 1 entrants is seven years. But because of lack of capacity in classrooms, there is a backlog of pupils who should start school but can't be accommodated. In 2015, four out of ten Grade 1 entrants in Grade 1 were over seven years of age. This problem is common in urban areas. The ESSP policy ambition is to lower the number of out-of-school children. Although it is difficult to give an exact number, population figures from the census report and the Grade 1 enrolment figures indicate that about half of the children in the seven-year age group (230,000 children) are currently not in school. The model assumes a gradual increase in primary enrolments greater than demographic growth to allow for lowering the backlog of seven-year-olds and to reduce the level of out-of-school children. The percentage of seven-year-olds not in Grade 1 would be lowered from 49 per cent to 45 per cent, 40 per cent and 35 per cent under the three different scenarios. Total enrolment in GRZ/GA primary schools is expected to increase from 2.5 million in 2015 to a range of 3.1–3.3 million by 2022.

Secondary education

The third policy ambition that has substantial financial implications is that of increasing the number of students in secondary education. According to the ESB data of 2015, 64.5 per cent of students made the transition from Grade 7 to Grade 8. The ultimate ambition is that all primary school students should have the chance to enter secondary education. While about 90 per cent of learners received a Grade 7 certificate, only about 65 per cent made the transition to Grade 8 in the period 2010–2015. Government policy is that a Grade 7 certificate allows automatic progression to Grade 8. In reality, there is not enough space in Grade 8 to accommodate all students with a certificate. Therefore the attainment of school places is regulated through cut-off points based on the scores of the Grade 7 exam. This means that after Grade 7, there is a serious dropout risk for a large share of students. This risk is higher in urban areas than in rural areas. In the last few years, GRZ has tried to increase the capacity at secondary education by building new schools and by transforming a selected number of basic schools into secondary schools. The pressure on Grade 8 (and also Grade 10) is, however, enormous and it is hard to keep up with the growing demand. The ESSP aims that enrolment in GRZ/GA secondary schools will increase from 0.7 million in 2015 to a range of 1.3–1.5 million by 2022.

6.3 TEACHERS AND SALARY (PE) COST PROJECTIONS

A fourth ambition is to improve the quality of education by lowering the pupil:teacher ratio (PTR). The national average PTR is not that far off from the national targets. As previously discussed, the real challenge is (i) to resolve the geographical inequity of teacher availability between rural and urban areas and between certain provinces, and (ii) to achieve a better mix of subject teachers.

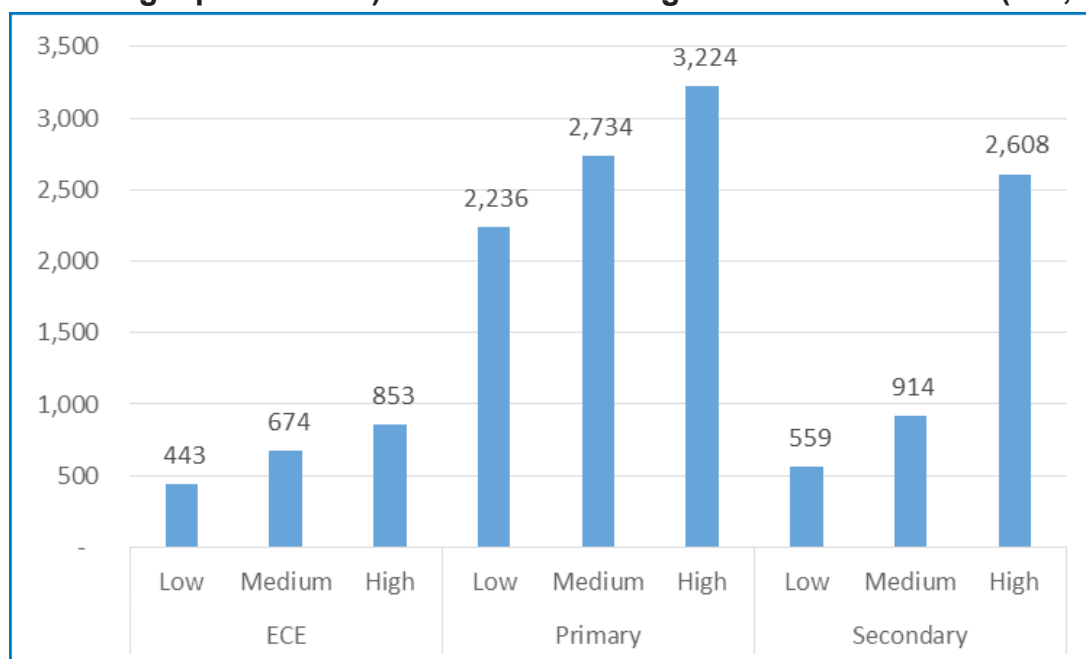
Nonetheless, there is also a natural growth in demand for teachers over time if the policies of higher intake and transition rates are achieved; there is also the goal of supporting more and larger community schools with GRZ teachers and this adds to the demand. In particular, for ECE there is an extra need for ECE teachers, assistant teachers and caregivers to catch up and realize the ambition to increase the percentage of Grade 1 pupils with ECE experience. Table 6.3 shows the assumptions about PTRs used by the model in the three scenarios.

Table 6.3. Assumptions concerning pupil:teacher ratio

	2015	2022		
	Baseline	Low	Medium	High
ECE				
Number of GRZ/GA ECE teachers*	NA			
PTR (average)	50	48	40	25
Primary				
Number of GRZ/GA class teachers	61,046			
PTR	42.7	41	40	40
Teacher attrition rate	2.0%	2.0%	1.8%	1.5%
Secondary				
Number of GRZ/GA subject teachers	20,335			
% Pupils in academic stream*	80%	78%	75%	70%
% Pupils in vocational stream*	20%	23%	25%	30%
Grade 8-9				
PTR (Grade 8-9)	45.9	43	42	40
Grade 10-12				
% Pupils in academic pathway	80.0%	77.5%	75.0%	70.0%
% Pupils in vocational pathway	20.0%	22.5%	25.0%	30.0%
PTR (Grade 10-12)	35.2	35	35	35

* When no official baselines available, the model uses best estimates

Given the projected enrolment and the PTR targets by 2022, the total number of additional teachers required can be computed. The model shows that in the short run, there is an urgent need for ECE staff. For primary and secondary education, the need for additional staff comes later in time. Figure 6.2 shows the average numbers of additional teachers per year under the different scenarios. These figures are without the annual natural attrition rates.

Figure 6.2. Average number of required additional teachers per year (2016–2022, excluding replacements) to achieve PTR targets for each scenario (low, medium, high)

The financial implications of adding these additional teachers to the payroll are illustrated in Table 6.4. It shows that in the low case scenario of projected learners, the payroll will increase from ZMW7.31 billion in 2018 to ZMW8.8 billion in 2022. For the high case scenario, this will be ZMW10.8 billion

Table 6.4. Salary (PE) implications for the three scenarios, 2018–2022

Personal Emoluments (low)	2018	2019	2020	2021	2022	Average
ECE	82	90	100	110	126	101
Primary education	5,459	5,699	5,927	6,199	6,464	5,950
Secondary education	1,773	1,799	1,915	2,037	2,188	1,942
Total costs in million ZMW	7,313	7,589	7,942	8,345	8,778	7,993

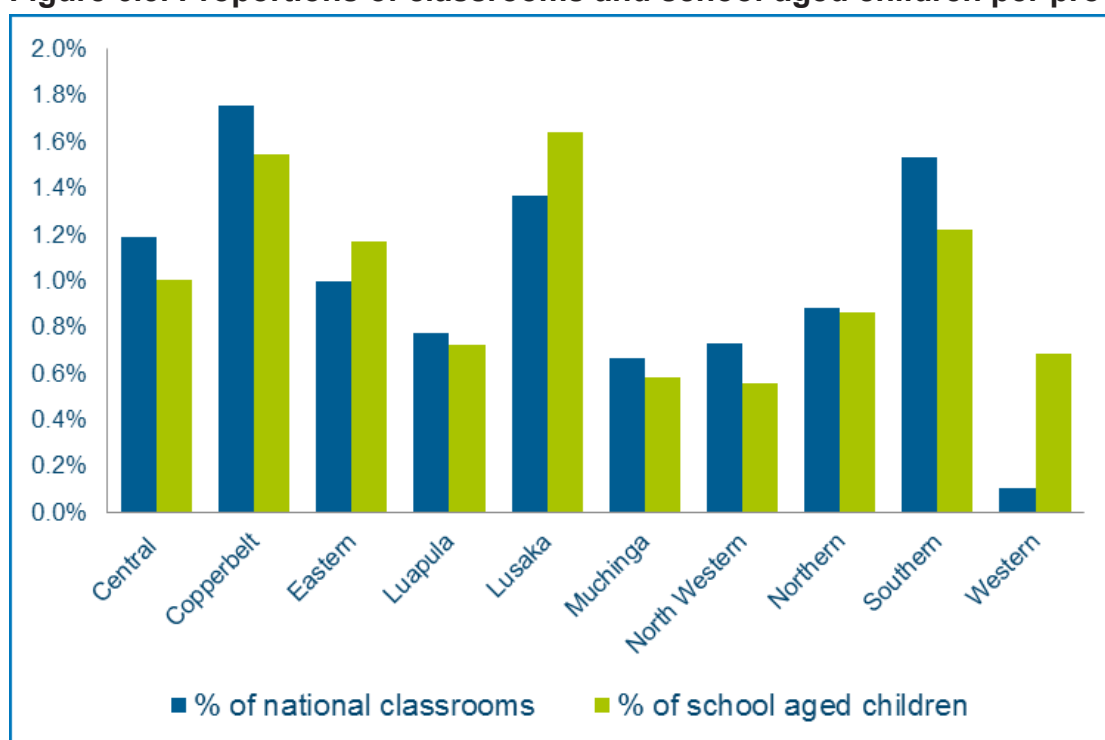
Personal Emoluments (medium)	2018	2019	2020	2021	2022	Average
ECE	106	126	147	170	191	148
Primary education	5,541	5,842	6,137	6,484	6,758	6,153
Secondary education	1,773	1,874	2,030	2,213	2,412	2,060
Total costs in million ZMW	7,420	7,842	8,314	8,867	9,361	8,361

Personal Emoluments (high)	2018	2019	2020	2021	2022	Average
ECE	116	142	171	206	242	175
Primary education	5,627	5,980	6,330	6,743	7,047	6,345
Secondary education	1,941	2,279	2,631	3,067	3,482	2,680
Total costs in million ZMW	7,684	8,400	9,133	10,015	10,771	9,201

6.4 INFRASTRUCTURE AND CAPITAL EXPENDITURE PROJECTIONS

Providing more school infrastructure (including classrooms, sanitation facilities, teacher houses, etc.) is a high-cost, necessary intervention. To maximize the impact of the intervention, it is important that infrastructure development targets the ‘right’ provinces when making decisions on new school constructions, based on actual needs. Evidence-based needs rather than political pressure should be the driver of this.

Figure 6.3 compares the number of classrooms per province in combination with the relative share of school-based population. The figure uses school-aged population and not enrolment figures to correct for children who are currently not in school but should be in school. The graph shows for instance that Lusaka provinces houses 16.4 per cent of the total school-aged population and has 13.7 per cent of national classrooms.

Figure 6.3. Proportions of classrooms and school-aged children per province

Source: computed based on ESB data and CSO, updated census data, medium case

The model uses the enrolments and existing number of classrooms to compute the pupil:classroom ratio. This is a rough national average and does not capture the geographical differences mentioned above, or the fact that the majority of schools use two or three shifts a day. Still, this ratio helps to give a proxy for the number of additional classrooms needed in the future. Table 6.5 gives the assumptions used to calculate the additional classrooms required during the ESSP period.

Table 6.5. Assumptions pupil:classroom ratio

Class rooms	2015		2022		
	Baseline	Low	Medium	High	
Current number of GRZ ECE classrooms	1.526				
Current number of primary classrooms	45.146				
Number of secondary classrooms	9.115				
ECE Pupil Classroom ratio	1:	43	43	40	35
Primary Pupil Classroom ratio (double shift)	1:	55	55	55	55
Secondary Pupil Classroom ratio (double shift)	1:	78	78	78	78

This table shows that a decrease in the pupil:classroom ratio is foreseen only for early childhood education. For primary and secondary education, the ratio has been kept stable. It should be understood, though, that even when the pupil:classroom ratio does not change, there will be a need for additional classrooms. More learners through higher transition rates combined with population growth means that, in absolute numbers, the infrastructure capacity needs to increase to maintain the status quo. The targets for the PTR therefore may not seem overly ambitious, but to keep up with the expected growth in enrolments it still means a considerable investment in infrastructure, as shown in Table 6.6.

Table 6.6. Estimated number of classrooms needed for the low, medium and high enrolment projection scenarios

Required number of classrooms	Baseline 2015						Average annual increase
		2018	2019	2020	2021	2022	
ECE classrooms							
Low	1,526	2,086	2,292	2,509	2,737	3,101	225
Medium	1,526	2,716	3,184	3,694	4,248	4,716	456
High	1,526	2,971	3,595	4,309	5,125	5,972	635
Primary classrooms							
Low	45,146	50,889	52,381	53,715	55,385	56,895	1,678
Medium	45,146	51,043	52,838	54,493	56,519	58,318	1,882
High	45,146	51,830	54,078	56,209	58,773	60,812	2,238
Secondary classrooms							
Low	9,115	9,902	10,557	11,019	11,499	12,134	431
Medium	9,115	10,066	10,882	11,528	12,302	13,205	584
High	9,115	11,367	13,040	14,646	16,629	18,662	1,364

Table 6.6 shows that over the period 2015–2022, the need for additional classrooms will more than double. For the high case enrolment scenario with an enrolment target of 25 per cent of the five- and six-year-olds, the need will be almost three times the current capacity with more than 635 new classrooms on average per year. For primary education, the total number of classrooms will need to increase between 26 per cent and 35 per cent. For secondary education, the number of classrooms will need to increase by at least 431 classrooms on average per year. The high case enrolment scenario with a transition rate from Grade 7 to Grade 8 of 100 per cent will require on average 1,364 new classrooms per year.

One way of lowering the cost of infrastructure development is with the support of the local communities, using the ‘community mode’ of construction. The model assumes that for ECE and primary 70 per cent of all construction is done through the community mode and 30 per cent through contractor mode. For secondary school classrooms, all are assumed to be done in contractor mode. Table

6.7 gives an overview of the estimated costs to realize the construction of those classrooms. The average costs range from ZMW0.6 billion to ZMW1.2 billion per year. The high case scenario leads to extra high costs for secondary education classrooms because of the 100 per cent Grade 7 to Grade 8 transition target under this scenario.

Table 6.7. Total costs in million ZMW to realize pupil:classroom targets for low, medium and high case enrolment projection scenarios

Capital expenditure (low)	2018	2019	2020	2021	2022	Average
ECE classrooms	19.4	20.4	21.5	22.6	36.0	24
Primary education classrooms	224.7	185.0	165.3	207.2	187.2	194
Secondary education classrooms	391.6	402.0	325.3	373.8	413.7	381
Teacher houses	207.8	247.3	267.8	304.9	294.8	265
Total costs in million ZMW	635.7	607.4	512.1	603.5	636.9	599

Capital expenditure (medium)	2018	2019	2020	2021	2022	Average
ECE classrooms	42.6	46.4	50.5	54.9	46.4	48
Primary education classrooms	260.3	222.6	205.2	251.3	223.0	232
Secondary education classrooms	487.4	513.8	449.6	538.1	540.4	506
Teacher houses	247.6	346.3	345.5	404.7	335.2	336
Total costs in million ZMW	790.3	782.7	705.2	844.3	809.8	786

Capital expenditure (high)	2018	2019	2020	2021	2022	Average
ECE classrooms	54.1	61.8	70.7	80.8	83.9	70
Primary education classrooms	313.9	278.8	264.2	318.0	252.9	286
Secondary education classrooms	751.3	842.6	816.5	993.8	946.7	870
Teacher houses	442.2	519.5	531.4	639.2	508.3	528
Total costs in million ZMW	1,119.3	1,183.2	1,151.4	1,392.6	1,283.5	1,226

6.5 NON-SALARY PRIMARY EDUCATION (PE) COSTS

Besides teacher salaries (PE), the model includes the most costly non-PE elements: school grants, bursaries, school feeding programme, teaching and learning materials as well as contributions towards open and distance learning and youth and adult literacy. The assumptions for these elements are set out below.

School grants

Another important low-cost but high-impact policy goal is to bring more equity in the allocation of school grants between provinces and schools. The current allocation of the grants is already based on enrolment figures and a special pro-poor allocation formula. However, there are considerable differences. Figure 3.3 in Section 3.4 above shows the average grant per pupil per province, which is as low as ZMW5 in Western Province compared with ZMW25 in Northern Province.

It is important to note that there are also significant between-school differences in the amount of school grants received within a province. For instance, both Muchinga and Eastern Province received ZMW19 per student on average, but most primary schools in these provinces do not receive any school grants at all, meaning that a few primary schools received much more to reach an average of ZMW19 per student. These differences cannot be explained by pro-poor arguments. It is therefore the MoGE's first priority in terms of the school grants to review the current allocation practices and fix them where necessary. Secondly, there is the goal of gradually increasing the volume of school grants per pupil according to the scenarios shown in Table 6.8.

Table 6.8. Assumptions for school grants for ECE, primary and secondary education

School grants	2015		2022	
	Baseline	Low	Medium	High
ECE budget school grants (in million ZMW)	2.8			
ECE school grant per learner	43.3	60	70	80
Primary budget school grants (in million ZMW)	95.0			
Primary education school grant per learner	38.1	60	70	80
Secondary budget school grants (in million ZMW)	42.1			
Secondary education school grant per learner	59.0	60	70	80

Bursaries

There are bursary support programmes for primary education for orphans and vulnerable children. In 2015, there were in total 43,203 bursaries for Grade 1–7 and 48,220 for Grade 8–12. This covers about 2.8 per cent of enrolments. About 40 per cent of those bursaries were funded by the MoGE. When dividing the total expenditure on bursaries by the number of beneficiaries, the average MoGE contribution is ZMW220 per bursary. The ESSP projects that both the volume and amount of GRZ-funded bursaries will gradually increase in the next five years.

Table 6.9. Assumptions for bursary support for primary and secondary education

Bursary support	2015		2022	
	Baseline	Low	Medium	High
GRZ Budget for bursary support (ZMW million)	19.7			
Learners G1-12 receiving bursary support	89,392			
% learners G-12 receiving bursary support	2.8%	4.0%	5.0%	6.0%
Average cost per bursary (ZMW)	220.4	240	260	300

School feeding

At some schools, children – and, indirectly, also the parents – benefit from the provision of school feeding programmes. School feeding programmes are in particular a strong measure to increase attendance of children from poor households. Some argue that school feeding is also a very strong instrument to increase learning outcomes, but the impact of these interventions on cognitive skills and abilities of students is still uncertain and needs further research. School feeding programmes are also very expensive and not very sustainable without the support of NGOs. The model has included the following scenarios on school feeding (see Table 6.10).

Table 6.10. Assumptions for school feeding programme for primary education

School feeding programme	2015		2022	
	Baseline	Low	Medium	High
GRZ actual spend in million ZMW on school feeding	32			
Average GRZ contribution towards school feeding per student G1-7	12.8	15	20	20

Teaching and learning materials

Provision of more TLMs is a costly but essential quality measure. As such, it is also included as one of the priorities of the ESSP (see Table 6.11). Even more so, an increase in funding is needed for the implementation of the two-tier system, especially in vocational subjects.

Table 6.11. Assumptions for teaching and learning materials

TLM	2015		2022	
	Baseline	Low	Medium	High
ECE				
GRZ budget Actual spent on TLMs to ECE	NA			
Average GRZ investment TLM per ECE learner in ZMW	NA	10	12	15
Primary				
Actual spent on centralised procured TLMs (incl. computers)	23,989,480			
Average investment TLM per learner in ZMW	9.6	18	20	22
Actual spent on decentralised school requisites	56,099,857			
Average allocation per learner in ZMW	22.5	25	28	30
Secondary				
Actual spent on TLMs to secondary (incl. computers)	26,225,789			
Average investment TLM per learner in ZMW	36.8	40	45	48

TLMs here not only concern GRZ/GA primary and secondary schools; the larger community schools should also be receiving some basic support through TLMs. For special schools for children with special educational needs, there is also in particular a need to invest in TLMs relevant to this group.

AMEP, ODL and CSEN

The AMEP sub-sector, covering alternative modes of educational provision, is one of the education sub-sectors whose overriding objective is to empower out-of-school children, youths and adults with basic literacy and functional skills to enable them to participate effectively in community and national development. However, the provision of AMEP has had challenges due mainly to inadequate funding, thereby failing to fulfil its mandate.

There is also high potential in open and distance learning (ODL). This could be a good alternative to lower the pressure on school infrastructure and to offer support to out-of-school children. Currently, the MoGE is looking into various options, such as radio, TV and e-learning. More research and pilot testing needs to be done, drawing lessons from distance learning programmes in other countries. The budget for ODL has been very modest so far. To implement the ambitions in this particular sub-sector the MoGE intends to free more resources over time.

Providing education for children with special educational needs is relatively costly when calculating the costs per learner. However, in absolute terms the amount is very small and hard to specify as there is no budget line for provision for this group and therefore also no baseline. The MoGE is considering including a separate budget line for this specific sub-sector to be able to monitor that it better.

The model has included the assumptions shown in Table 6.12 for YALE (the former name for AMEP), ODL and provision for children with special educational needs. Even in the low case scenario there should be a ten-fold higher provision than in the baseline figure.

Table 6.12 Assumptions for AMEP/YALE, ODL and CSEN

YALE, ODL and CSEN	2015		2022	
	Baseline	Low	Medium	High
Total costs ODL and YALE in mln ZMK	2.4			
Total MOGE budget	7,980			
ODL and YAL share of total MOGE budget	0.03%			
ODL, YALE and CSEN share of total MOGE budget	NA	0.3%	0.5%	1.0%

Total non-PE

When the total costs of these non-primary education targets are costed (using a medium case enrolment projection scenario), the outcome is as follows.

Table 6.13. Total MoGE costs in million ZMW to realize non PE-targets (using medium learners projection scenario)

Non-PE (low targets)	2018	2019	2020	2021	2022	Average
School grants	190.7	211.3	231.6	254.5	282.8	234
Teaching and Learning materials	136.5	148.6	160.4	173.9	188.7	162
Bursaries	28.1	31.6	35.1	39.1	49.4	37
School feeding	39.2	41.6	43.9	46.6	51.3	45
ODL , Y&AL and CSEN (incl PE)	15.4	20.7	26.5	33.0	39.4	27
Total costs in million ZMW	409.9	453.8	497.5	547.1	611.7	504

Non-PE (medium targets)	2018	2019	2020	2021	2022	Average
School grants	209.3	237.3	265.3	296.9	335.9	269
Teaching and Learning materials	145.6	161.3	176.9	194.6	213.6	178
Bursaries	33.7	39.6	45.8	52.9	63.7	47
School feeding	46.2	51.3	56.4	62.2	67.4	57
ODL , Y&AL and CSEN (incl PE)	48.1	66.7	87.2	109.9	127.4	88
Total costs in million ZMW	482.9	556.1	631.6	716.5	807.9	639

Non-PE (high targets)	2018	2019	2020	2021	2022	Average
School grants	227.9	263.2	299.1	339.3	388.7	304
Teaching and Learning materials	152.6	171.1	189.5	210.4	233.4	191
Bursaries	41.2	50.7	61.1	73.3	89.4	63
School feeding	46.2	51.3	56.4	62.2	67.4	57
ODL , Y&AL and CSEN (incl PE)	48.1	66.7	87.2	109.9	127.4	88
Total costs in million ZMW	515.9	602.9	693.4	795.1	906.2	703

The difference between the low and high targets is on average ZMW200 million per year. Compared with the overall resource envelop of about ZMW9–10 billion, this is a relatively small difference that has a potentially huge impact.

6.6 REVENUE PROJECTIONS FOR MOHE

A financial simulation model for university education and TEVET is not currently available (but will be by 2021). These two sub-sectors are under the mandate of the MoHE, which was largely absent from the education sector analysis exercise. Given this situation, the integration of higher education and TEVET into the overall projections is based on enrolments extrapolated from current levels and current unit costs, increased by 10 per cent per year in order to cover expected quality improvements. These cost projections are shown in Table 6.14. They are drawn from the IP costing for higher education and TEVET, as per Annex 4. The shortcomings of this approach will be corrected early in the plan period since this ESSP includes development of EMIS for higher education – one for university and one for TEVET – in its implementation plan.

In this context, it should be noted that the MoHE budget for 2019 has been reduced by 23 per cent (Table 6.14). The implications of this in terms of enrolments and quality improvements are not clear, since the higher education institutions are largely autonomous. One implication, however, will be the importance of activity 7.4.2 in the IP (development of a mechanism for the sustainable financing for public universities).

Table 6.14. MoHE projected budgets

Programme	2018 Budget	2019 Budget Projection	2020 Budget Projection	2021 Budget Projection
5504: University Education	1,434,081,084	1,130,909,984	1,244,000,982	1,368,401,081
001 University Education Provision	1,203,523,136	1,051,802,154	1,156,982,369	1,272,680,606
008 Infrastructure Development	230,557,948	79,107,830	87,018,613	95,720,474
5506: Skills Development Provision	360,966,283	255,871,411	281,458,552	309,604,407
001 Skills Development Provision	303,107,535	240,754,150	264,829,565	291,312,522
005 Infrastructure Development	57,858,748	15,117,261	16,628,987	18,291,886
5507: Science Technology and Innovation	127,223,807	95,063,630	104,569,993	115,026,992
001 Science, Technology and Innovation Coordination	83,666,244	60,506,067	66,556,674	73,212,341
002 Scientific Research and Development	10,300,000	10,000,000	11,000,000	12,100,000
003 Technology Commercialization	10,435,595	11,735,595	12,909,155	14,200,070
004 Innovation Promotion	5,821,968	5,821,968	6,404,165	7,044,581
005 Infrastructure Development	17,000,000	7,000,000	7,700,000	8,470,000
5508: Management and Support Services	51,735,535	51,735,535	56,909,089	62,599,997
001 Executive Office Management	3,561,863	3,561,863	3,918,049	4,309,854
002 Human Resources Management and Administration	21,810,044	21,810,044	23,991,048	26,390,153
003 Financial Management - Accounting	2,719,760	2,719,760	2,991,736	3,290,910
004 Financial Management - Auditing	1,815,413	1,815,413	1,996,954	2,196,650
005 Procurement Management	1,624,002	1,624,002	1,786,402	1,965,042
006 Planning & Policy Coordination	13,724,453	13,724,453	15,096,898	16,606,588
007 Data Management and Information	6,480,000	6,480,000	7,128,000	7,840,800
Total	1,974,006,709	1,533,580,560	1,686,938,616	1,855,632,478

Source: MoHE

Table 6.15. Estimated cost projections for MoHE in million ZMW to realize policy objectives

	2019	2020	2021
UNIVERSITY EDUCATION			
Improved access	1,133	1,247	1,383
Improved quality	13	13	13
Enhanced equity	557	557	557
Improved management	5	5	3
<i>Sub-totals</i>	<i>1,708</i>	<i>1,822</i>	<i>1,956</i>
TEVET			
Improved access	259	270	287
Improved quality	14	14	14
Enhanced equity	18	19	19
Improved management	203	210	222
<i>Sub-totals</i>	<i>494</i>	<i>513</i>	<i>542</i>
GRAND TOTAL =	7,036		

6.7 REVENUE PROJECTIONS FOR MOGE

The model also includes assumptions on the future resource envelope of the MoGE to implement the ESSP. This will depend on GDP growth and also on the share of GRZ budget that will be allocated to education. The assumptions are shown in Table 6.16.²⁶

Table 6.16. Revenue assumptions for three scenarios

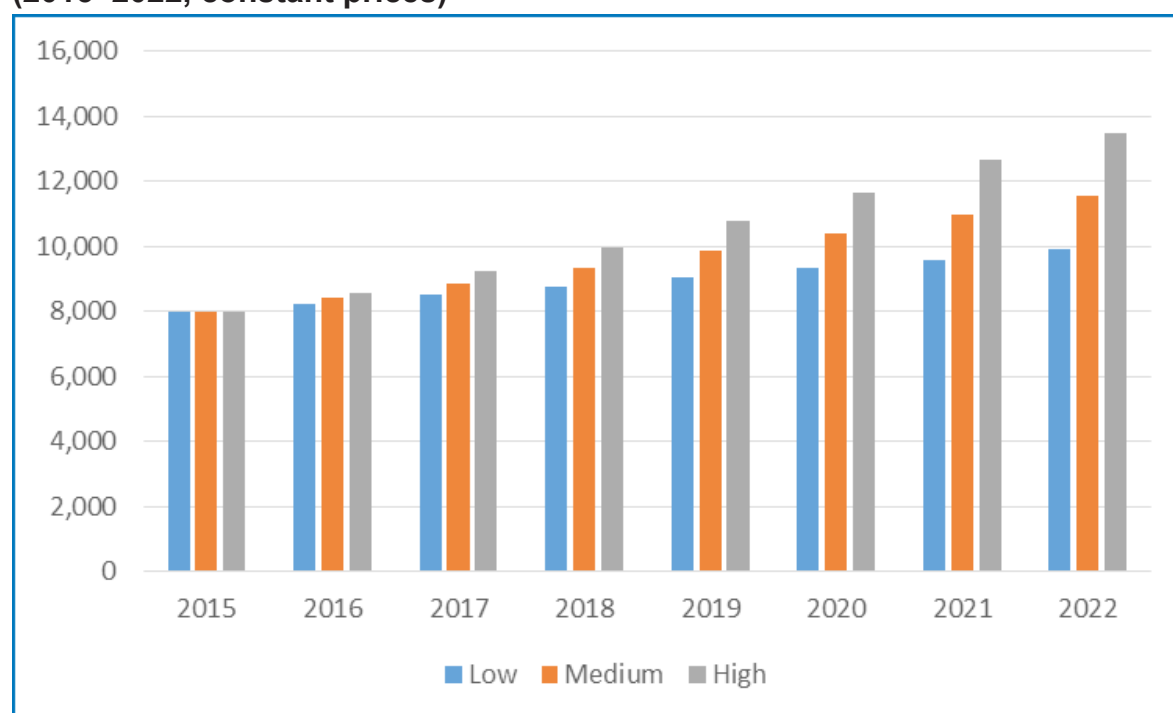
Revenue assumption	2015	2021		
	Baseline	Low	Medium	High
GDP (million ZMW)	271,350			
MoGE budget (million ZMW)	7,980			
Real GDP growth (inflation corrected)	3.5%	3.0%	4.0%	5.0%
GRZ budget as % of GDP	17.3%	17.2%	18.0%	19.0%
MoGE budget as % of GRZ budget	17.0%	17.0%	18.0%	19.0%
MoHE budget as % of GRZ budget	3.0%	3.0%	3.0%	3.0%

The contribution of the CPs to GRZ budget in the form of general or sector budget support has reduced significantly in recent years. Most of the current support to the sector is provided as project support and is not included in the government's budget. Given the uncertainties over direct budget support in the coming years, the model concentrates on GRZ funding only.

The private sector also plays an important role in the realization of the ESSP targets. It is, for instance, expected that the share of enrolments in private primary and secondary schools will increase. This is also not reflected in the costing model.

Based on these projections the annual budget forecast is depicted in Figure 6.4. The budget ranges in 2022 from ZMW9.869 million in the low case scenario to ZMW13.489 million in the high case scenario (constant 2015 prices).

Figure 6.4. Total MoGE budget in million ZMW for low, medium and high case scenarios (2015–2022, constant prices)



²⁶ Financial contributions from parents are not negligible. As noted in Section 3.4 above, households spend on average 6.3 per cent of their annual incomes on education and secondary schools rely heavily on various fees which, on average, amount to ZMW250 per student per term. See also Figure 3.4, in Chapter 3.

Financing from cooperating partners

Table 3.3 shows (i) that the amount of support from cooperating partners (CPs) declined from USD 102 million in 2009 to USD 12 million in 2013 and then increased to USD 57 million in 2016, and (ii) that the relative importance of this financing has declined to between 1 per cent and 7 per cent of total education financing since 2013. The average annual share of CP contributions to overall sector financing was at 18 per cent between 2006 and 2009; between 2010 and 2016 this declined to 5 per cent.

Indications are that decision points regarding external support to the education sector have not been made in the home CP countries, therefore making it hard at the moment for embassies and agencies to communicate their financial commitments in supporting education in Zambia in the next four years or so. At this stage, there are no indications that external financing commitments to the education sector would go beyond 2 per cent. The Ministries of Education and central government will embark on additional efforts to raise the portfolio contribution of CPs to the education sector.

6.8 TOTAL COST AND REVENUE PROJECTIONS FOR MOGE

The sections above have summarized the assumptions on and targets for:

- number of expected learners;
- number of required teachers, classrooms;
- expected school grants, TLMS, bursaries, etc.;
- expected revenue.

An overview of the total projected costs is given in Table 6.17 for the medium case learner projections combined with the medium case revenue and cost projection. The total resources required to reach major sector targets have been estimated up to 2022. In the medium cost scenario, the costs to achieve the mentioned targets are ZMW9,279 million in 2018 and they increase by 25.7 per cent to reach ZMW11,662 million in 2022.

Given the projected revenues under the medium scenario, this scenario is within reach. For the first three years there is a positive result. In the last two years there is a negative balance. On average there is a small positive balance.

Table 6.17. Summary of expected enrolment, budget and expenditure, 2018–2022 (medium scenario): MoGE

Total enrolment in GRZ/GA schools	2018	2019	2020	2021	2022	Average
ECE	112,421	130,326	149,465	169,911	183,925	149,210
Primary	2,814,595	2,911,076	2,999,667	3,108,538	3,207,466	3,008,268
Secondary	787,927	851,815	902,420	962,962	1,033,678	907,760
Total budget MOGE in million ZMW	2018	2019	2020	2021	2022	Average
Budget forecast	9,337	9,852	10,403	10,991	11,580	10,433
Total expenditure MOGE in million ZMW	2018	2019	2020	2021	2022	
1. Personal emoluments	7,420	7,842	8,314	8,867	9,361	8,361
2. Non-PE	483	556	632	716	808	639
3. Capital expenditures	790	783	705	844	810	786
4. Management and support services	586	609	634	659	683	634
Total costs in million ZMW	9,279	9,790	10,285	11,087	11,662	10,421
Balance						
Unallocated / financing gap	59	62	118	-96	-82	12

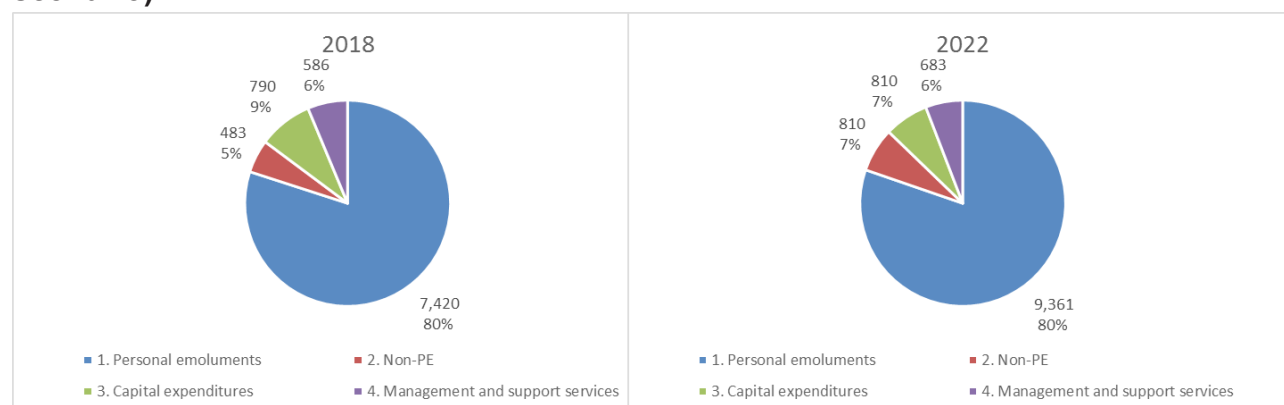
The largest share of the MoGE projected costs, around 80 per cent, is for personal emoluments (PE) costs. While total PE cost will increase further, the relative share of the PE component will remain the same. There is only a small shift in relative share towards the non-PE component (TLMs, school grants, etc.) as shown in table 6.17

Table 6.18. Summary of expected enrolment, budget and expenditure, 2019–2022

Enrolments in MoGE institutions		2019	2020	2021
	Students in public univ.	48,138	52,952	58,729
	Students in TEVET	45,000	47,000	50,000
MoHE Budget forecasts (ZMW million)		1,534	1,687	1,856
Estimated cost projections for:				
	Students in public univ.	1,708	1,822	1,956
	Students in TEVET	494	513	542
	<i>Totals</i>	<i>2,202</i>	<i>2,335</i>	<i>2,498</i>
Balance				
	<i>Financing gap</i>	<i>-668</i>	<i>-648</i>	<i>-642</i>

The largest share (around 84 per cent), by far, of the MoHE budget is transferred directly to universities and TEVET institutions. The financing gap for higher education (university education + TEVET) is much greater than that for MoGE.

Figure 6.5. Relative share of the main projected cost categories, 2018 & 2022 (medium scenario)



Since 80 per cent of the expenditure is linked to salary payments, any variation in the other cost categories will have a relatively modest impact on the overall picture. However, in terms of impact on the sector, this is where the highest impact is found, which argues for a gradual shift towards a higher non-PE component in the budget.

Different scenarios can be tested with the model and an overview of the main assumptions of the model can be found in Annex 7.

IMPLEMENTATION
RISK
MANAGEMENT 7

7. IMPLEMENTATION RISK MANAGEMENT

All strategic plans carry a risk profile. The likelihood of successful implementation will depend on the extent to which the inherent risks can be anticipated and managed. The plan must lend itself to an integrative approach to execution – that is, there needs to be a move away from the traditional silo-based approach to managing the system. The desired system would be driven by educational priorities to which all the sub-sectors would respond in the most efficient and effective manner.

Educating a nation is an expensive undertaking. Zambia's expenditure on education has ranged between 16 per cent and 20 per cent of the domestic budget in the last eight years. Zambia's economy has seen very low growth in the last few years. Considering this, as well as the fact that the country has not benefited very much from its natural resources, the funding of education is a major challenge. Consequently, resource stewardship is of paramount importance. The system must find ways to do more with less. Government must also find ways to protect the limited resources available as well as seek ways to reduce the potential impact of exogenous risks on the education system.

Government largely finances the provision of education. However, when faced with competing development priorities, national and sub-national education budgets are at risk of being cut or reduced. Education budgets can be more affected by decisions to reverse budget allocation than those that are politically high-profile. Reversals and changes within the education budget frequently affect non-wage expenditures (i.e., learning materials and school maintenance). Teachers' salaries, often the largest item in the education budget with a share of 70–80 per cent, are less likely to be cut. While it may be difficult to decrease spending on salaries, shortages of textbooks and poor school infrastructure can provide disincentives for parents to send their children to public schools.

Key stakeholders in the education sector include (i) policy makers, planners and researchers; (ii) boards responsible for standards and accreditation; (iii) education and training providers; (iv) suppliers of textbooks and school supplies, equipment, facilities and services to education, and training providers; (v) students, parents and employers; (vi) development partners and investors; (vii) civil society organizations, including teacher unions, industry associations, and media; and (viii) oversight entities responsible for enforcing laws and regulations, such as the ombudsman, judiciary and audit offices.

Examining the formal and informal relationships among stakeholders can help identify where risks may lie. Politicians, for example, may interfere in budgetary allocations and releases. Such interference can distract the focus of sector plans. Vested interests may influence large procurement projects because these provide opportunities for personal enrichment. Teacher deployment and promotion, for example, may be subject to family connections and nepotism. Those without connections may be assigned to remote locations. Parents may bribe school officials to ensure that their children will be admitted to the school of their choice. Teachers or examiners may collude with students by selling examination questions in advance or by manipulating examination results.

Stakeholder analysis is important in understanding the governance of the education sector. Governance tends to be more effective when there is (i) a demand for accountability from stakeholders; and (ii) a supply of management/governance (where actors in power share information, take decisions within a clearly defined regulatory framework and transparently allocate resources, offer space for participation, and are accountable for their actions). Stakeholder analysis can be expanded into a political economy analysis that identifies affected groups and looks at their position vis-à-vis policy changes, their influence on government, the likelihood of their participation in coalitions to support change, and alternative strategies for overcoming governance risks.

Human resources and skills in education policy formulation and planning are essential at the sector level. To engage effectively with finance ministries, development partners and civil society organizations, communication and negotiation skills are vital. In higher education, the move toward

greater privatization has placed new pressures on campus administrators to secure new funding streams and diversify resources, manage funds in transparent ways, and exercise accountability. The growing trend toward decentralized education systems has called for greater managerial and leadership skills in school administration.

Recruitment of human resources, based on merit and competence, is vital for efficient sector operations and for delivering expected development outcomes. Political interference and conflict of interest can, however, affect the appointment and promotion of senior-level officials with decision-making authority, and of teachers. Low teacher morale, often linked to poor pay and working conditions, can impede the attainment of high-quality education. Putting in place safeguards against conflict of interest, strengthening accountability, and improving teacher deployment and motivation are pertinent sector concerns.

Procurement is subject to the requirements of governments and development partners. Basic principles are transparency, a level playing field, and awarding of contracts that represent the best value for money. Officials, bidders and procurement agents, however, may find ways around procurement rules to make illegal gains. Specifications may be tailored to certain bidders, or technical complexity may be used to justify lock-out specifications to favour a particular contractor. Invitations to bid may not be published, thereby restricting the number of bidders, or there may be very short deadlines for bid submission in order to make it difficult for bidders who have no prior knowledge of the contract. A staff member of an education institution may take part in the selection of a supplier from a number of bidding firms, and favour firms operated by a relative or a friend, or in which he/she has a financial interest. The evaluation criteria for contract awards may not be clear, leaving no basis to justify decisions. Contractors may offer kickbacks to school administrators who, in turn accept substandard textbooks, facilities, and equipment. The school administration may falsify inspection certificates or ignore inferior facilities and learning materials from their contractors as a result of kickbacks. The involvement of third party monitoring and inspection by non-governmental organizations and other appropriate entities ensures transparency in procurement.

In terms of textbook procurement, both the government and the supplier face certain concerns. For the government, developing adequate technical specifications for the book itself and the subject matter is a key concern, along with decisions to separate manuscript development (publishing) from textbook printing. Assigning manuscript copyrights to the government can ensure that contracts for subsequent reprinting are not captured by the publisher that initially developed the manuscript. For the supplier, competitiveness of the local industry partly determines how textbook procurement is packaged. When the market is divided among a small group of publishers or when procurement is sole-sourced to a copyright owner, textbook prices are likely to be high. Textbook delivery can also be a problem when delays occur.

The education management information system (EMIS) is essential for managing education systems. A computerized EMIS helps organize data and information systematically to serve various needs: planning and budgeting, education services, policy research and analysis, monitoring and evaluation, and international collaboration and communication. EMIS comprises a set of processes for gathering and managing data and information about schools and schooling (e.g., budgets, teacher deployment, distribution of teaching materials to schools, student performance assessment, internal efficiency of the education system). Examining the formal and informal relationships among stakeholders can help identify where risks may lie and evaluative outputs are collected, analysed and disseminated to users. Two types of users exist: internal and external. Internal users are planners, decision makers, and the different departments and divisions of the education ministry.

External users are other government and non-governmental institutions, national and international organizations, development partners, and civil society. The usefulness of EMIS depends on timely and reliable production of data and information, data integration and sharing, and effective use of

data and information for policy decisions. Therefore, an effective interface between EMIS and ICT is vital. A strengthened EMIS can help in monitoring financial management, procurement, and other governance concerns.

When key systems and processes (i.e., budget allocation, procurement, teacher appointment, deployment, and promotion) are not transparent, discretionary decision making may occur. Weak capacity increases the likelihood of misallocation of resources, expenditure leakages, lack of performance monitoring and evaluation, and low demand for services among the poor. It can be manifested in poorly designed and unenforceable contracts with the service provider. Risks tend to be relatively more serious where accountability is absent, decision making is discretionary, and lack of transparency is prevalent. Risks need to be assessed and prioritized in terms of likelihood and seriousness.

Annex 8 presents an extensive review of potential risks to the ESSP and possible mitigation measures.

ANNEXES

Annex 1. SDG 4 – EDUCATION 2030 TARGETS AND INDICATORS

Level & Outcome	Targets			For monitoring in 2017	Requires further development
Primary and secondary education	Target 4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes				
Learning	4.1.1	1.	Proportion of children and young people (a) in Grade 2 or 3; (b) at the end of primary education; and (c) at the end of lower secondary education achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex	YES	YES
	4.1.2	2.	Administration of a nationally representative learning assessment (a) in Grade 2 or 3; (b) at the end of primary education; and (c) at the end of lower secondary education	YES	
Completion	4.1.3	3.	Gross intake ratio to the last grade (primary education, lower secondary education)	YES	
	4.1.4	4.	Completion rate (primary education, lower secondary education, upper secondary education)	YES	
Participation	4.1.5	5.	Out-of-school rate (primary education, lower secondary education, upper secondary education)	YES	
	4.1.6	6.	Percentage of children over-age for grade (primary education, lower secondary education)	YES	
Provision	4.1.7	7.	Number of years of (a) free and (b) compulsory primary and secondary education guaranteed in legal frameworks	YES	
Early Childhood	Target 4.2 By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education			For monitoring in 2017	Requires further development
Readiness for primary school	4.2.1	8.	Proportion of children under 5 years of age who are developmentally on track in health, learning and psychosocial well-being, by sex	YES	YES
Participation	4.2.2	10.	Participation rate in organized learning (one year before the official primary entry age), by sex	YES	
Readiness for primary school	4.2.3	9.	Percentage of children under 5 years experiencing positive and stimulating home learning environments	NO	YES
Participation	4.2.4	11.	Gross early childhood education enrolment ratio in (a) pre-primary education and (b) and early childhood educational development	YES	
Provision	4.2.5	12.	Number of years of (a) free and (b) compulsory pre-primary education guaranteed in legal frameworks	YES	
TVET and Higher Education	Target 4.3 By 2030, ensure equal access for all women and men to affordable quality technical, vocational and tertiary education, including university			For monitoring in 2017	Requires further development
Participation	4.3.1	15.	Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex	YES	YES
	4.3.2	13.	Gross enrolment ratio for tertiary education by sex	YES	
	4.3.3	14.	Participation rate in technical-vocational programmes (15- to 24-year-olds) by sex	YES	
	Additional areas for development	Affordability, quality		not applicable	YES
Skills for work	Target 4.4 By 2030, substantially increase the number of youths and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship			For monitoring in 2017	Requires further development
Skills	4.4.1	16.2	Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill	YES	YES
	4.4.2	16.1	Percentage of youth/adults who have achieved at least a minimum level of proficiency in digital literacy skills	NO	YES
	4.4.3	17.	Youth/adult educational attainment rates by age group, economic activity status, levels of education and programme orientation	YES	YES to simplify

Level & Outcome	Targets		For monitoring in 2017	Requires further development	
	Additional areas for development	Measures of a broader range of work-related skills than ICTs, other employment-related indicators		not applicable	YES
Equity	Target 4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations		For monitoring in 2017	Requires further development	
Policy	4.5.1	...	Parity indices (female/male, rural/urban, bottom/top wealth quintile and others such as disability status, indigenous peoples and conflict-affected, as data become available) for all education indicators on this list that can be disaggregated	YES	
	4.5.2	18.	Percentage of students in primary education whose first or home language is the language of instruction	NO	YES
	4.5.3	19.	Extent to which explicit formula-based policies reallocate education resources to disadvantaged populations	NO	YES
	4.5.4	20.	Education expenditure per student by level of education and source of funding	YES	
	4.5.5	21.	Percentage of total aid to education allocated to least developed countries	YES	
Literacy and Numeracy	Target 4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy		For monitoring in 2017	Requires further development	
Skills	4.6.1	22.	Percentage of population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex	YES	YES
	4.6.2	23.	Youth/adult literacy rate	YES	
Participation	4.6.3	24.	Participation rate of illiterate youth/adults in literacy programmes	NO	YES
Global Citizenship	Target 4.7 By 2030, ensure all learners acquire knowledge and skills needed to promote sustainable development, including among others through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity and of culture's contribution to sustainable development		For monitoring in 2017	Requires further development	
Provision	4.7.1	25.	Extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in: (a) national education policies, (b) curricula, (c) teacher education and (d) student assessment	YES	YES
	4.7.2	28.	Percentage of schools that provide life skills-based HIV and sexuality education	NO	YES
	4.7.3	29.	Extent to which the framework on the World Programme on Human Rights Education is implemented nationally (as per the UNGA Resolution 59/113)	NO	YES
Knowledge	4.7.4	26.	Percentage of students by age group (or education level) showing adequate understanding of issues relating to global citizenship and sustainability	NO	YES
	4.7.5	27.	Percentage of 15-year-old students showing proficiency in knowledge of environmental science and geoscience	NO	YES
	Additional areas for development	Attitudes and values, lifelong learning/non-formal, qualitative indicators		not applicable	YES

Level & Outcome	Targets			For monitoring in 2017	Requires further development
School Environment	Target 4.a Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all			For monitoring in 2017	Requires further development
Resources	4.a.1	31.	Proportion of schools with access to: (a) electricity; (b) Internet for pedagogical purposes; and (c) computers for pedagogical purposes	YES	YES
		32.	Proportion of schools with access to: (d) adapted infrastructure and materials for students with disabilities		
		30.	Proportion of schools with access to: (e) basic drinking water; (f) single-sex basic sanitation facilities; and (g) basic hand-washing facilities (as per the WASH indicator definitions)		
Environment	4.a.2	33.	Percentage of students experiencing bullying, corporal punishment, harassment, violence, sexual discrimination and abuse	NO	YES
	4.a.3	34.	Number of attacks on students, personnel and institutions	NO	YES
	Additional areas for development	Expenditure, national quality standards		not applicable	YES
Scholarships	Target 4.b By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training, information and communications technology, technical, engineering and scientific programmes in developed countries and other developing countries			For monitoring in 2017	Requires further development
Numbers	4.b.1	36.	Volume of official development assistance flows for scholarships by sector and type of study	YES	
	4.b.2	35.	Number of higher education scholarships awarded by beneficiary country	NO	YES
	Additional areas for development	Support for marginalized students		not applicable	YES
Teachers	Target 4.c By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States			For monitoring in 2017	Requires further development
Trained	4.c.1	39.	Proportion of teachers in: (a) pre-primary education; (b) primary education; (c) lower secondary education; and (d) upper secondary education who have received at least the minimum organized teacher training (e.g., pedagogical training) pre-service or in-service required for teaching at the relevant level in a given country, by sex	YES	
			40.		
Qualified	4.c.3	37.	Proportion of teachers qualified according to national standards by education level and type of institution	YES	
	4.c.4	38.	Pupil:qualified teacher ratio by education level	YES	
Motivated	4.c.5	41.	Average teacher salary relative to other professions requiring a comparable level of qualification	NO	YES
	4.c.6	42.	Teacher attrition rate by education level	YES	
Supported	4.c.7	43.	Percentage of teachers who received in-service training in the last 12 months by type of training	NO	YES

Note:

Dark Grey Shading = Global indicators

Red Font = Modifications to original list of 43 thematic indicators

Annex 2. THE 7NDP CATEGORIES AND THE ESSP FRAMEWORK

7NDP STRATEGIES		Enhance access to quality, equitable and inclusive education				Enhance access to skills training				Enhance private sector participation				Continuous review of curriculum						Enhance role of science, technology and innovation											
SECTOR PRIORITY THEMES & STRATEGIES AND INTERVENTIONS	Strengthening Policy Improving management Expanding Infrastructure Removing barriers Specialised Services Enhancing Teaching Improving Learning	7 NDP PRIORITY PROGRAMMES		Updating policies, legislation, regulations Financing, procurement, M&E reporting, Coordination		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX			
		Developing Policy Implementing & Monitoring Policy		Enhancing capacity provincial, district, school levels		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX	
		Increasing Efficiency		Strengthened information and reporting systems		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX	
		Expanding Access and Improving Equity		New Construction		Using different modalities		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX	
		Expanding Access and Improving Equity		Rehabilitation & Maintenance		Targeted rehabilitation and Equipment Provision		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX	
		Expanding Access and Improving Equity		Cultural, social; institutional		Addressing gender, and cultural barriers		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX	
		Expanding Access and Improving Equity		Physical; Economic		Targeting geographic disparities; equitable grants		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX	
		Expanding Access and Improving Equity		Modalities		Continuing Education; Youth & Adult Literacy Education; Skills Development; Special Needs; SMT		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX	
		Expanding Access and Improving Equity		Services		Open and Distance Learning; Broadcasting Services; Library Services; School Guidance		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX	
		Enhancing Quality		Teacher Education		Pre-Service; In-service; CPD Recruitment; Deployment;		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX	
Enhancing Quality		Teacher Management		Performance management; career development		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX			
Enhancing Quality		Curriculum Development		Curriculum development; curriculum implementation		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX			
Enhancing Quality		Assessment & Standards		Standards; Learning Assessment		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX			



Annex 3. ESSP IMPLEMENTATION PLAN

1. Early Childhood Education (ECE): Improved ECE for 5-6 year old's												
Strategic Objective	Activities	Indicators		Base Year 2016 indicators		Targets 2021		Timing			Responsible	Funding sources
		Outputs	Outcomes	Outputs	Outcomes	Outputs	Outcomes	2019	2020	2021		
1.1 Improved access to ECE for 5-6 years olds	1.1.1 Create ECE centres	Numbers of: - community - ECE annexed - ECE Zonal - District centers - centers of excellence	% of grade 1 entrants with ECE experience	1,849 ECE centres (n=193,056 learners; 36% private); all are ECE annexed	24% of Grade 1 learners (n=193,056 learners; 38% private) have ECE experience	6,696 ECE centres created - 3048 community - 1526 annexed - 2060 ECE Zonal - 0 District - 60 Centres of excellence	50% of Grade 1 enfants have ECE experience (n=338,000 learners; 41% private)				ECE DPI	GRZ UNICEF
	1.1.2 Pilot alternative mode of ECE provision	Number of pilot centers		none		2, with evaluation						
1.2 Improved quality of ECE	1.2.1 Equip ECE teachers with appropriate skills and practices	Number of ECE Teachers equipped with appropriate skills & practices		1249		2144					ECE TESS	GRZ UNICEF
	1.2.2 Provide suitable kits for indoor and outdoor play activities	# of centres that received the kits		20 in annexed centres		4032 (centres of excellence, District, annexed and zonal)					ECE Standards	
	1.2.3 Provide suitable TLM	% of centres with appropriate TLM		25%		70% of ECE centres					ECE	
	1.2.4 Implement school readiness assessment	% of ECE centres applying school readiness assessment		Piloted in 30 centres		Applied in 100% of the centres					ECE Standards	
	1.2.5 Implement child developmental milestone Assessment	Status report on the implementation of child developmental milestone assessment		Tool piloted in 10 provinces		Review Child developmental milestone Assessment tool CDASS Tool' and early development standards implemented in all centres					ECE	
	1.2.6 Establish transition management mechanism from ECE to Grade 1	Status report on the development of transition mechanism		None		Transition mechanism established and being implemented					ECE	
	1.2.7 Enhance the implementation of the standardised teacher training strategy	Status report on the implementation of the standardised teacher training strategy		All colleges of education are implementing the standardised strategy		Enhanced implementation of the Standardised teacher training strategy					ECE	
	1.2.8 Strengthen the implementation of ECE CPD Strategy	Status report on implementation of ECE CPD Strategy		ECE CPD strategy and modules have been developed		ECE CPD Strategy implemented from provincial to zonal level					ECE TESS	
	1.2.9 Develop a mechanism to expand the supply of ECE teachers	Status report on development of a mechanism to expand supply of ECE teachers		About 1000 teachers graduating every year		2,000 ECE teachers supplied every year					ECE	
	1.2.10 Provide mechanism for engagement/hiring of care givers	Status report on the development of mechanism for engagement of care givers		PTA and Community committees hiring		ECE care givers engaged /hired through approved government mechanisms and structure					ECE HRA	
1.3 Enhanced equity in ECE provision	1.3.1. Strengthen and expand School Feeding Programme	Percentage of ECE centres with school feeding	Healthy learners with access to School feeding programme	0	% of learners who have access	All ECE centres have feeding programmes	100% learners access school feeding programme				ECE DPI	GRZ UNICEF
	1.3.2. Strengthen and expand WASH programme	Percentage of ECE centres with adequate WASH facilities	Healthy learners with access to WASH facilities	0	% of learners who have access	All ECE centres have WASH programmes	100% learners access WASH facilities				ECE/DPI	
	1.3.3 Integrate CSEN programs	Number of children screened for early identification and referred to specialised services	Status on screening for CSEN	CSEN enrolled but no special programmes for them	None	All enrolled ECE children screened for early identification	CSEN identified and catered for in ECE				ECE TESS	
1.4. Enhanced efficiency in ECE delivery	1.4.1. Develop clear strategy for financing universal ECE	Strategy for financing universal ECE	Status of financing strategy	None, but financed through ministry annual works plans & budgets	Weak financing stream that is not sustainable	Financing strategy in place & implemented	Sustainable, stable and predictable financing of ECE				ECE DPI Accounts	GRZ UNICEF
	1.4.2. Ensure quality data collection on ECE	ECE data integrated into MoGE EMIS	Comprehensiveness & robustness of EMIS	ECE data not integrated in EMIS	No comprehensive, reliable & robust data on ECE	All ECE centres are providing information for EMIS	Robust information of enrolments & service providers for ECE				ECE DPI	
	1.4.3. Improve assessment of the needs of CSEN in ECE	CSEN Assessment Tool	Usage and usefulness of assessment tool	Developed by TESS	CSEN Needs poorly understood, lack of firm evidence	CSEN Assessment Tool in place	Assessment tool to evaluate the needs of CSEN applied in all ECE centres				ECE TESS	
	1.4.4. Sensitise the public on community & private driven establishment of ECE centres	Regulation guiding development of ECE centres developed	Level of participation by the community and private in ECE	No guidelines or regulations	About 75% are private, though establishment is not well regulated	Regulation guiding establishment of community & private ECE centres in place	Community & private participation in establishment of ECE centres formalised & well coordinated				ECE	
	1.4.5. Devise mechanisms for multi-sectoral collaboration to support ECE	Multi-stakeholder support platform	Application of Multi-stakeholder platforms	No mechanisms in place	Mechanisms for multi-sectoral collaboration to support ECE in place	Multi-stakeholder support platforms in place	Multi-stakeholder platform applied to support all ECE centres				ECE DPI	
	1.4.6. Develop guidelines on the establishment of community and private ECE centres	Status on guidelines for establishment of community and private ECE centres	Regulations on establishment of community and private ECE centres	In the process of being developed	Establishment of Community and private ECE centres is not well regulated	Guidelines for establishment of community and private ECE centres developed and implemented	Establishment of community and private ECE centres formally regulated				ECE	
	1.4.7. Advocacy programs at all levels on the concepts and benefits of ECE	Status report on Advocacy programs	Application of Multi-stakeholder platforms	In the process of developing programs	Stakeholder participation is low for the poor families & rural areas	Advocacy programs implemented at all levels	Improved participation of stakeholders in ECE especially for the poor & rural areas				ECE	



2. Improved Primary Education (PE)												
Strategic Objective	Activities	Indicators		Base Year 2016		Targets 2021		Timing			Responsible	Funding sources
		Outputs	Outcomes	Outputs	Outcomes	Outputs	Outcomes	2019	2020	2021		
2.1 Improved access and internal efficiency	2.1.1 Build more classrooms	Number of new classrooms	Net Intake Ratio (NIR)	48,414 classrooms	NIR = 56.7%	32,567 new classrooms	NIR = 100%	→			DPI Standards	GRZ
	2.1.2 Nation-wide rollout of the Catch-Up programme to reduce repetition and re-integrate OOSC	Number of schools delivering catch-up programme		Program available for regular students only in two provinces (80 schools)		All schools	All learners learning at appropriate level	→				GRZ/USAID
	2.1.3 Devise mechanism to mitigate the growing number of Out-of-school children	Mechanism that takes into account ongoing activities, good practice & research		Transit schools being piloted (249, 586 learners)		Mechanism developed & implemented	OOSC reduced by two thirds	→			DPI Standards AMEP	GRZ/USAID
	2.1.4 Develop a mechanism to promote age appropriate grade 1 intake	Mechanisms for age-appropriate enrolment that takes into account ongoing activities, good practice & research		No mechanism in place; policy states that grade 1 entrants should be 7 years old		Policy adherence enhanced with strict guidelines implemented	NIR = 100%	→			DPI Standards	GRZ
	2.1.5 Develop Framework for fast tracking education & flexible curriculum for the over aged	Status of Framework to Fast track education for the over aged		None		Framework to fast tracking education & flexible curriculum developed & implemented	→					
2.2 Improved quality of primary education	2.2.1 Enhance the head teacher leadership & management skills with focus on pedagogical leadership competencies	Number of head teachers trained on Zambia Education Management Tool	Learning outcomes	Number of head teachers trained = 2967	NAS learning outcomes (2014) data Eng=32%, Math=36%, LS=35%, ZL=35%	100% Head teachers in primary education have ZEMT experience and applying it	Improved learning outcomes (scores) Eng=36%, Math=39%, LS=40%, ZL=40%	→			HRA TESS DPI	GRZ
	2.2.2 Expand targeted reading & numeracy Interventions in PE	Number of Primary schools implementing reading interventions in G1-4	Percentage of Grade 1 learners breaking through	No data	20% of Grade 1 learners breaking through	All primary schools have reading interventions for G1-4	100% of Grade 1 learners breaking through	→			TESS DPE	GRZ USAID
	2.2.3 Expand the use of learning assessments in PE as guided by the NAF	Number of schools using NAF	Learning outcomes	Curriculum framework, Literacy and Numeracy frameworks	Eng=32%, Math=36%, LS=35%, ZL=35%	NAF distributed to all 8500 primary schools & being used	Improved learning outcomes Eng=36%, Math=39%, LS=40%, ZL=40%	→			DPI Standards	
	2.2.4 Implementation of TaRL mechanism for the teaching of foundation literacy & numeracy	Districts trained	Literacy & numeracy levels amongst learners		Low levels of numeracy & literacy amongst the learners	Mechanism devised & 80% of the teachers for G1-4 upskilled	Improved numeracy and Literacy in Lower Primary School Grades	→			TESS HRA	
	2.2.5 Enhance implementation of school based formative assessment	Status report on the enhancement of formative assessment	Learner accountability on performance	Some schools are not implementing school assessments & there is poor record keeping	Learning outcomes	All primary schools to implement formative learner assessments at all grade levels	Improved learning outcomes (scores) Eng=36%, Math=39%, LS=40%, ZL=40%	→			Standards	
	2.2.6 Development of TLM	Number of TLM developed	State of reading culture and learning achievements	Almost all the TLM are proprietary	Inadequate number of TLM leading to poor reading culture	Ministry developed TLM	Ministry owning the rights to the TLM leading to enhanced provision, good reading culture and learning achievements	→				
	2.2.7 Provision of TLM	Number of pupils with TLM		Books are shared on average 1 book by 4 pupils		1 to 1 access to TLM		→				
2.3 Enhanced equity in primary education provision	2.3.1. Strengthen & expand School Feeding Programme and WASH	- % of primary schools with school feeding - % of primary schools with adequate WASH facilities	Provision of school feeding programme and WASH	- 25% coverage of school feeding in primary - 20% of school meet MOGE WASH standards	High rate of absenteeism, poor nutrition status of learners and poor levels of hygiene in the schools not covered by the programmes	- All primary schools implement school feeding - All primary schools meet WASH standards	Healthy learners leading to increased school attendance and improved learner outcomes Eng=36%, Math=39%, LS=40%, ZL=40%	→			DPI	GRZ WFP Mary's Meals
	2.3.2 Develop mechanisms to increase retention of girls in rural areas	Development of a mechanism that takes account of ongoing activities, good practice & research	Rural girls' completion rates	None but there are uncoordinated activities and interventions	Rural girls' completion rates = 94%	Document on mechanisms to increase retention for girls in rural areas developed & implemented	Rural girls completion rates = 99%	→			DPI Standards PEOs, DEBS, schools	GRZ CPs
	2.3.3 Formulate mechanisms to raise the performance amongst girls in rural areas		Rural girls' scores on assessment tests EGRA/EGMA & ECZ	None, but various ongoing activities	rural boys-girls gap	Implementation of the mechanism	Parity in performance in Maths & Literacy across critical subject areas by location & gender	→			DPI Standards PEOs	



3. Improved Secondary Education (SE)												
Strategic Objective	Activities	Indicators		Base Year 2016		Targets 2021		Timing			Responsible	Funding sources
		Outputs	Outcomes	Outputs	Outcomes	Outputs	Outcomes	2019	2020	2021		
3.1 Improved access to secondary education	3.1.1. Strengthen evidence based allocation of school infrastructure	School infrastructure allocations based on school mapping	Participation Rates (NER)	Last comprehensive school mapping done in 2000	NER=25%	School map completed & implemented	NER = 35%				DPI	GRZ
	3.1.2. Build more classrooms in existing schools	Number of classrooms		- Existing classrooms=10,938 - Transition to Grade 8 = 67 % - Transition to Grade 10 = 49 %		Classrooms = 15,000 constructed, Transition rate to G8 = 100%, Transition for G10= 55%						
	3.1.3. Construction of standard low cost model secondary schools closer to the communities	Number of standard low cost model secondary schools		None		130						
	3.1.4. Strengthen use of alternative modes in the provision of secondary education	Proportion of secondary schools offering alternative modes of education provision		AMEP being done on a small scale		50% of secondary schools using AMEP						
	3.1.5. Construction of Girls Secondary Schools	Number of Girls Secondary Schools constructed		60 girls secondary school constructed		20 Girls Secondary School constructed						
3.2 Improved quality of secondary education	3.2.1 Ensure that head teacher supervision is applied appropriately to increase teacher's interactions with learners	Number of head teachers trained on ZEMT	Learning outcomes, especially in STEM subjects	Over 300 head teachers, DEBS, PEOs trained in ZEMT	Eng=31%, IS=34%, Math=27%	All head teachers in SE have ZEMT experience	Improved learning outcomes: Eng=40%, IS=42%, Math=35%				TESS DPI Standards	GRZ
	3.2.2 Improve equitable recruitment & deployment of teachers especially those for Science, Mathematics and Technology (STEM)	Mechanism for recruiting & deploying STEM teachers is developed that takes into account ongoing activities, good practice & research		None		Mechanism for recruiting & deploying STEM teachers developed						
	3.2.3 Strengthen the use of learning assessments in SE as guided by the NAF	Number of schools using NAF		Learning assessment is being implemented in all schools but is weak		Learning assessments strengthened						
3.3 Enhanced equity in secondary education provision	3.3.1 Enhance implementation of comprehensive sexuality education CSE	- Number of teachers trained in CSE; - Status report on development of CSE grades 7 & 12 textbooks	Schools providing counseling services	- 60,000 teachers trained in CSE - Textbooks for grades 5, 6, 8, 9, 10 & 11 developed	1000 schools with counseling services	- All teachers trained; - Textbooks for grades 7 & 12 developed, printed & distributed	All Secondary school providing counselling services				DPI TESS	GRZ USAID UNESCO
	3.3.2 Work with stakeholders for the provision of dormitories for weekly boarding or safe houses	Availability of dormitories or safe houses		236 weekly Boarding facilities		50						
	3.3.3 Improve the management of the scholarship & bursary schemes for vulnerable learners	Strategy for planning & management of bursary programme that takes into account ongoing activities, good practice & research		IGRZ with stakeholders are in the process of doing something under the GEWEL project		Strategy for planning & management of bursary & scholarship schemes developed & implemented						
	3.3.4. Conduct research to understand why girls are dropping out of school even with targeted interventions in place	A study that takes into account ongoing activities, good practice & research		None; girls & CSEN still dropping out despite interventions for their retention		Studies presented with clear reasons for dropping out & recommendations for addressing the challenges						
	3.3.5 Research on why CSEN drop-out of secondary school											
3.4 Improved efficiency of secondary education	3.4.1. Enhance education leadership and management using the Zambia Education Management Tool (ZEMT)	Number of Head Teachers trained on ZEMT		Over 300 head teachers, DEBS, PEOs trained in ZEMT	0	All Head Teachers in SE have ZEMT experience	0				DPI Standards	GRZ USAID

4. Alternative Modes of Education Provision (AMEP)												
Strategic Objective	Activities	Indicators		Base Year 2016		Targets 2021		Timing			Responsible	Funding sources
		Outputs	Outcomes	Outputs	Outcomes	Outputs	Outcomes	2019	2020	2021		
4.1 Increase access to education of the OOSC, youth & adults through use of technology	4.1.1 Devise strategy to reach reach OOSC, youth & adults	A strategy that takes into account ongoing activities, good practice & research	People signing-up and benefiting from e-courses from AMEP	None, though there are some activities aimed at reaching the OOSC, youth & adults 186,000 learners benefiting	No national e-learning portal with courses	Strategy developed & being implemented	Increased participation in education with at least 1,000,000 learners using AMEP	→			DAMEP DPI	GRZ UNICEF
	4.1.2 Establish national e-learning portal	Status report on establishment of portal		No National e-learning portal though there are uncoordinated initiatives		A robust, integrated National e-learning portal developed		→				
	4.1.3 Equip Kitwe studios with appropriate transmission equipment	A fully equipped and functional studio		Dilapitaed, obsolete and disfunctional infrastructure		A fully equipped & functional studio		→				GRZ PPP
	4.1.4. Develop and/or upload e- content (including OERs) on National E-Learning Portal or platform	Status report on the development & uploading of e-content		Some content is available but seating on different prioprietary platforms		E-Content being developed continuously & accessible on the National E-Learning Portal		→				
	4.1.5 Re-equip Zacode college with appropriate materials	Status report on the re-equipping of ZACODE		Dilapitaed, obsolete and disfunctional infrastructure		A fully equipped & functional ZACODE		→				DAMEP DPI
	4.1.6. Equip Skills centres & schools for continuing education with appropriate ICT infrastructure & equipment	# of skills centres equipped, # of SFCE equipped		25 Skills centres & 13 SFCE have dilapidated infrastructure		25 Skills Centres & 13 SFCE equipped with appropriate infrastructure		→				GRZ DAMEP PPP
	4.1.7 Establish an AMEP center of excellence	Status report on the establishment of the centre of Excellence		None		A Center of Excellence for AMEP established & functional		→				DAMEP
	4.1.8 Digitization of existing teaching & learning materials	Status report on digitisation		No digital content available		Teaching and learning programmes/materials digitised & accessible to learners		→				GRZ PPP DAMEP Standards
4.2 Improved quality of AMEP	4.2.1 Develop standard self-instructional study modules	Printed modules for all learners	% of AMEP courses whose assessment and certification is aligned to other nationally recognised certification bodies	- 7 Modules (7 different subjects) are available on hard copies - only 1,400 copies	AMEP courses assessment and certification not yet established	- 13 different Modules available for all learners in hard and/or soft copy -20,000 copies	All AMEP courses developed have assessments and certification aligned to other nationally recognised certification bodies	→			DAMEP Standards	GRZ
	4.2.2 Staff capacity building for the development of electronic & digital content	Number of staff receiving training		- 15 staff (of >36) have been trained - Uncoordinated capacity building		30 Staff Capacity built in developing electronic & digital content		→				
	4.2.3 Development of assessment & certification for AMEP aligned to other certification bodies	Status report on development of assessment & certification programmes		none		Assessment & certification instruments in place & recognized		→				
4.3 Enhanced equity in AMEP	4.3.1 Provide bursary support to disadvantaged students	Proportion of vulnerable AMEP lerners on bursary & scholarship scheme	Participation rates of vulnerable learners in AMEP	None	This is a new programme yet to be implemented	Bursary & scholarship scheme for AMEP developed & implemented	Participation rates at 30,000 leaners (based on CSO disability ratio of 3%)	→			DAMEP	GRZ PPP
	4.3.2 Develop AMEP TLM for CSEN	Status report on development of CSEN TLM		None		All AMEP programmes have CSEN TLM		→				
4.4 Improved efficiency of AMEP	4.4.1 Increase awareness of benefits of AMEP through Information, Education & Communication (IEC) framework	Status report on development of advocacy & accountability strategy	Participation rates	No IEC framework	186,000 learners enrolled in AMEP	IEC framework developed and implemented	Efficient and well organised provision of AMEP services with planned M&E time frames	→			DAMEP	GRZ PPP
	4.4.2. Build institutional capacity in the management, monitoring & evaluation of AMEP programmes	Number of AMEP management staff trained		Very minimal capacity building has been done so far		Build capacity in all institutions offering AMEP programmes		→				
	4.4.3. Development of AMEP implementation framework	Status report on the development of the framework		None, though there is a ODL framework		Strategic implementation Framework for AMEP developed & being implemented		→				



5. Teacher Education and Specialised Services (TESS)															
Strategic Objective	Activities	Indicators				Targets 2021		Timing			Responsible	Funding sources			
		Outputs	Outcomes	Outputs	Outcomes	Outputs	Outcomes	2019	2020	2021					
5.1 Improved access to teacher education	5.1.1 Improve & expand facilities for practical & specialised subjects (STEM) through innovative approaches	Number of colleges of education expanded and/or improved	Participation rates in colleges, especially in STEM	12 Colleges of education with only 5 offering STEM, Enrolment is about 5000 with less than 1000 being STEM teachers	Supply of STEM teachers not meeting the national demand	All the 12 public colleges of education expanded & upgraded to offer STEM . Enrolments increased to 6,000 with 2,000 being STEM	Supply of teachers to schools increased, leading to improved learning outcomes especially in STEM subjects	→			TESS Standards DPI	GRZ JICA			
	5.1.2 Establishment of centres of excellence, colleges of education in STEM and ECE	Number of centres of excellence colleges of education in STEM and/or ECE established		None		1 centre of excellence college of education in STEM & 1 centre of excellence college of education in ECE established		→					TESS DPI	GRZ PPP	
	5.1.3 Construct CSEN user friendly schools and/or provide facilities for CSEN at already existing schools	Number of CSEN schools and/or facilities constructed	Availability of CSEN user-friendly facilities improved	50 Schools for CSEN	Mostly poor with many facilities not conducive	At least 3 CSEN schools constructed (finish off the 2 under construction)		CSEN have access to friendly learning centres	→			DPI TESS	GRZ		
5.2 Improved quality of teacher education	5.2.1 Strengthen the capacity of colleges of education to implement the aligned teacher education curriculum	Lecturers trained in implementation of TE curriculum	Colleges of Education using aligned curriculum	TE is aligned to school curriculum	Some teachers at primary have inadequate pedagogy skills, while some at secondary have limited knowledge on content	Continuous alignment between primary & secondary curriculum & teacher curricula	Adequate Teacher competences & skills enabling them deliver school curriculum effectively	→			DPI TESS Standards	GRZ			
	5.2.2 Strengthen teacher preparation and CPD strategies	Status report on the teacher preparation and CPD strategies		Teacher preparation & CPD programmes have been developed but are weak		Quality teacher preparation & CPD programmes in place		→							
	5.2.3 Strengthening teaching of STEM subjects to CSEN	Number of teachers for blind children trained		No teachers have training		60 specialized teachers trained		→							
	5.2.4 Development of teacher Professional standards	Status report on the development of teacher professional standards		None		Teacher Professional standards developed & implemented		→							
5.3 Enhanced equity in teacher education	5.3.1 Strengthen the capacities to provide guidance & counselling services for the serving lecturers	Number of serving lecturers trained in guidance and counselling	Skills of Teachers and lecturers of Guidance & counselling improved	Ineffective Guidance & counselling in colleges of education	Skills of Teachers and lecturers of Guidance & counselling Inadequate	24 college lecturers equipped with guidance & counselling skills	Supportive environment for CSEN leading to high enrolment & improved learning	→			TESS Standards	GRZ			
	5.3.2 Strengthen the capacities to provide guidance & counselling services for the serving teachers	Number of serving teachers trained in guidance and counselling		Some secondary schools especially the upgraded ones have no guidance & counselling teachers, while none in primary schools		9500 serving teachers equipped with guidance & counselling skills		→							
	5.3.3 Formulate education framework for CSEN	Status Report on Formulation of teacher education framework for CSEN		None		Education framework for CSEN developed & implemented		→							
5.4 Improved efficiency of teacher education	5.4.1 Enhance the system to enrol student teachers based on national teacher demands	Mechanism to enrol student teachers based on national teacher demands developed	Student enrolment based on national teacher demands	None	Colleges training more social sciences teachers than STEM, without any demand criteria	All colleges adhering to the mechanism on enrolling students in line with the national demands	Desired balance in the training of social sciences & STEM teachers achieved	→			TESS	GRZ JICA			
	5.4.2 Conduct capacity building activities for resource centre coordinators on education leadership & management	Number of resource centre coordinators trained		Number of resource coordinators performing according to desired criteria		None		Inadequate leadership & management capacities of RC coordinators	14 Provincial, 115 District, 1055 Zonal Resource centre coordinators trained	Effective leadership & management of TRC			→		
	5.4.3 Conduct capacity building activities for college managers on education leadership & management	Number of college managers trained		Number of college managers performing according to desired criteria		None		Inadequate leadership and management capacities of college managers	12 College managers trained	Effective leadership & management of colleges		→			GRZ
	5.4.4 Develop library service policy framework	Policy framework developed		Library services provided according to the policy guidelines		None		Fragmented library services	Policy Framework development and implemented	Standardised provision Library services		→			TESS Standards DPI
	5.4.5 Establish strategy to promote reading culture	Strategy to promote reading culture in public libraries developed		More people reading from public Libraries		None		Poor reading culture	Mechanism for promoting reading culture established and implemented	More people going to the Libraries		→			



Strategic Objective	Activities	Indicators		6. Management and Support Services (MSS)				Timing		Responsible	Funding sources		
		Outputs	Outcomes	Base Year 2016		Targets 2021		2019	2020			2021	
				Outputs	Outcomes	Outputs	Outcomes						
6.1 Effective governance, planning & management at all levels	6.1.1 Provide the required infrastructure for education management in districts	Number of district offices created	All DEBS have adequate office space	72 DEBS with adequate office space	Poor management & low morale staff due to lack of working space	42 district offices created	Effective & efficient management with coordinated and planned training plans				DPI	GRZ	
	6.1.2 Formulate a comprehensive capacity development strategy, structures, salary grades & related incentives for efficient organisation & effective service delivery	Formulation of the strategy		No strategy in place other than training policy	Very little coordination on training plans	Institutional audit & analysis leading to a comprehensive strategy					HRA		
	6.1.3 Formulate clear financing strategy for all the subsectors	Formulation of the strategy for financing of education		No strategy for education in place for financing other than the JASZ which has been abrogated by many partners	Uncoordinated financing leading to duplication of roles and activities	An effective financing strategy for education developed & being implemented	Harmonised and sustained financing & budgeting in the education sector				DPI Accounts		
	6.1.4 Formulate strategy for effective evidence based linkages between policy, planning & budgeting to foster sector outcomes	Formulation of strategy		No strategy in place in place for evidence based linkages between policy, planning & budgeting	No proper linkages and use of data between policy, planning & budgeting	Strategy for effective evidence based linkages between policy, planning & budgeting in place & being implemented	Evidence based policy, plans & budgets resulting in optimal utilisation of resources				DPI		
	6.1.5 Strengthen & automate the management information system	Status report on strengthening & automation of management information systems	Effectiveness of Strategies formulated and implemented	EMIS is in place though some processes are not automated	Highly centralised EMIS with some sectors missing while some processes are manual	Robust & comprehensive EMIS in place aligned to international norms and standards	More effective & efficient management, improved feedback						GRZ PPP
	6.1.6 Strengthen and decentralise staff recruitment & placement system	Strategy on strengthening & decentralisation of the recruitment & placement system		Recruitment & placement is centralised	Staff recruitment and deployment is inefficient mostly because it is centralised	Strategy developed and being implemented							HRA
	6.1.7 Strengthen legal, regulatory and policy environment	Status report on review of the Education Policy of 1996 (Educating our future) and review of the Act		Education policy of 1996, Education Act of 2011	Old regulatory and policy environment not responsive to the current education needs	Education Act of 2011 reviewed, approved & being implemented. Education policy of 1996 reviewed, approved & being implemented	Conducive legal & regulatory policy environment						
	6.1.8 Establish frameworks for public financial management, effective procurement, HR systems and robust institutional leadership development plans	Establishment of the frameworks		No frameworks other than for management, finance act, procurement act, manual HR systems & inadequate institutional development plans	Inadequate guidance for finances, procurement, HR systems and institutional development plans	Frameworks for public financial management, effective procurement, HR systems & robust institutional leadership development plans formulated	Effective public financial management, procurement & institutional leadership development plans						GRZ
	6.1.9 Enhance the ability of the system to recruit the trained teachers needed & with the skills needed	Strategy for responding to teacher demand	Teacher demand & supply (per subject area) adequately maaged	Teacher recruitment & deployment was based on demand until about 2012, now there is no concrete system in place other than looking at establishment	Teacher recruitment & deployment are not efficient & not responsive to needs on the ground	Strategy for responding to teacher demand in place	Teacher supply responsive to demand requirements						DPI HRA TESS
6.2 Effective management of pedagogical functions	6.2.1 Establish a memorandum of understanding between general education schools & TVET institutions on vocational programmes, teachers & facilities	Status report on the development of memorandum of understanding	Accessibility to TVET institutions and instructors	None. Collaboration started when it was one ministry, now we are separate Ministries	Unpredictable collaboration	Memorandum of understanding in place	Learners in selected schools accessing specialised rooms, workshops & instructors in TVET institutions leading to enhanced practical skills					TESS DPI Standards TVET HRA	
	6.2.2 Delink standards from administration	Status report on delinking standards from administration	Structure and reporting mechanisms	Standards part of the mainstream education administration	Compromised decision making	A semi-autonomous standards unit delinked from mainstream education structure	Standards unit with enhanced transparency & accountability for effective M&E of education delivery					Standards HRA	
	6.2.3 Enhance institutional & teacher monitoring & inspection	Frequency of Institutional & teacher monitoring & inspection conducted	Institutional and teacher monitoring & inspection enhanced	Infrequent institutional & teacher monitoring & inspection (once in three years)	Inadequate institutional and teacher monitoring & inspection	Frequency of Institutional and teacher monitoring & inspection conducted (Atleast twice a year).						TESS HRA Standards	
	6.2.4 Develop framework for teacher management in the school	Framework for teacher management developed	Teacher management framework implemented	None, other than the code of ethics	Inadequate teacher management	All Head teachers implementing Framework for teacher management at school level	Improved teacher learner contact time leading to improved learning outcomes						
	6.2.5 Develop framework for supervision & support at points of education delivery	Status report on the development framework for supervision and support at points of education delivery	Effectiveness of teacher supervision	None, other than the schemes & records of work	Inadequate teacher supervision leading to reduced time on task & ineffective lesson delivery	Teacher supervision framework developed and being implemented						HRA Standards	
	6.2.6 Formulate strategy for procuring, distributing & utilisation of TLM	Status report on the formulation of TLM procurement, distribution strategy	Value for money procurement system	Ineffective system	No value for money in procurement, distribution & utilisation of TLM	A cost-effective procurement distribution & utilisation strategy in place & adhered to	A value for money effective & efficient procurement, distribution & utilisation of TLM					Standards Procurement All	
	6.2.7 Develop strategies to reduce imbalances in the allocation of teachers by gender, rural/urban	Strategies to reduce imbalances in the allocation of teachers by gender, rural and urban	Reduced disparities in the public school pupil:teacher ratios as measured by the "degree of randomness" coefficient	Uneven teacher distribution	Degree of randomness for: primary = .38; secondary = .52	Efficient teacher utilisation	Degrees of randomness for primary = 0.20; for secondary= 0.40						HRA Standards
	6.2.8 Provision of alternative modes of providing teacher accommodation	Number of housing units constructed through alternative modes of accommodation provision	Better motivated teachers along with higher stability & lower attrition	None, though government pays housing allowance & a few are given house loans (73,949 teachers & 22,558 houses at Primary; 22,279 teachers & 7,809 houses at Secondary)	Higher teacher attrition & geographical imbalances	15,000 housing units constructed through alternative modes	Improved teacher retention & motivation						HRA
	6.2.9 Establish mechanisms for identification of best practices in education delivery from national & international experience	Mechanism for identifying best practices developed	Identification & usage of best practices leading to improved learning	A few best practices in place & being used though there is no formal mechanism for their identification	Fragmented & poorly coordinated knowledge on how to improve teaching & learning	Mechanisms for identification of best practices in education established & implemented	Zambia implementing harmonised national & international best practices leading to improved learner competences						ALL
6.3 Removing barriers to access quality education	6.3.1 Strengthen home-grown school feeding programs	Number of provinces & districts implementing home-grown feeding program	NER	Home grown school feeding programme in 56 districts feeding 1,500, 000	Prim NER=90.4%, Sec NER=25%	Home grown school feeding programme rolled out to all schools benefiting all students	Prim NER=99%, Sec NER=35%					DPI	
	6.3.2 Develop minimum standards for WASH	Status report on the development of minimum standards for WASH in schools		None; WASH/MHM programme is being implemented		Minimum standards for WASH developed, validated & being implemented							



7. University Education												
Strategic Objective	Activities	Indicators		Base Year 2016		Targets 2021		Timing			Responsible	Funding sources
		Outputs	Outcomes	Outputs	Outcomes	Outputs	Outcomes	2019	2020	2021		
7.1 Improved access to University Education	7.1.1. Increase numbers of students enrolled in public (& private) universities	Number of learners enrolled in public universities	% increase in learners accessing university education	75,520		120,000					MOHE TEVET/Planning and Information	GRZ
	7.1.2 Enhance private sector participation in the provision of higher education	Number of universities dully registered		61		100					MOHE TEVET	
7.2 Improved quality of University Education	7.2.1 Enhance research capacity in universities	Number of research laboratories equipped	% increase in research laboratories in Institution of higher learning	0		15					MOHE TEVET/Planning and Information	GRZ
	7.2.2 Enhance industry responsive curriculum development & review based on tracer studies and discussion with industry	Number of existing curriculum reviewed/ number of new curriculum developed	Industry responsive curriculum developed	36		100					MOHE TEVET	
	7.2.3 Enhance the qualifications of lecturing staff	Number of lecturers undergoing qualifications upgrade	% lecturers with upgraded qualifications / skills	38		100					MOHE TEVET	
7.3 Enhanced equity in University Education	7.3.1. Enhance the loans and bursary scheme to support students especially those vulnerable or from disadvantaged groups	Number of OVC receiving loans and bursaries	% increase in access to higher education loan support	19,598		189,598					MOHE TEVET/Planning and Information	GRZ
7.4 Improved management of university education	7.4.1. Strengthen the regulatory functionalities of the Higher Education Authority and ZAQA as a way of maintaining and improving quality and credibility.	Revise Higher Education Act and HE Policy	Regulatory and legal framework strengthened	0 Policy; ZAQA Act & HEA Act		Revised regulatory and legal framework in place; institutional development implemented	Regulatory and legal requirements in place				MOHE HEA / ZAQA / Planning and Development	GRZ
	7.4.2. Create an enabling environment for innovative ways of funding universities	Sustainable financing mechanism for public universities	Financial Position and governance of public universities improved	0		Sustainable financing mechanism for public universities in place	Report on status of HEIs moving towards to self-financing produced				MOHE / MoF	GRZ
	7.4.3. Creation of a management information system for higher education	Development of a web-based MIS	Availability of key data	0		Web-based Management Information System in place	Report on status of MIS for HEIs produced				MOHE HEA/Planning and Development	GRZ

8. Skills Development (TEVET)													
Strategic Objective	Activities	Indicators		Base Year 2016		Targets 2021		Timing			Responsible	Funding sources	
		Outputs	Outcomes	Outputs	Outcomes	Outputs	Outcomes	2019	2020	2021			
8.1 Improved access to TEVET	8.1.1 Increase the number of students enrolled in TEVET	Number of learners enrolled in public TEVET institutions	% increase in learners accessing skills training	43,108		60,000	0	→			MOHE TEVETA/Planning and Development	GRZ	
	8.1.2 Enhance private sector participation in the provision of skills training	Apprenticeship/work-based learning framework	% private sector providing work-based learning	0		Apprenticeship/work-based learning framework in place	Increased number of Graduates with industrial experience leading to reduced costs on training				MOHE TEVET/Private sector		
8.2 Improved quality of TEVET	8.2.1 Enhance capacity of training institutions	number of training workshops equipped	% increase in training institutions with state of the art training equipment	0		25	All TEVET institutions are using competency based and other types of school based assessments	→			MOHE TEVETA/Planning and Development	GRZ	
	8.2.2 Enhance industry responsive curriculum development and review based on tracer studies and discussion with industry	Number of existing curriculum reviewed / number of new curriculum developed	% of the TEVET curriculum reviewed / developed	100		300	Increased efficiency and effectiveness of graduates in the industry	→			MOHE TEVETA/Planning and Development		
	8.2.3 Enhance the qualifications of lecturing staff	Number of lecturers undergoing qualifications upgrade	proportion of lecturers with qualifications upgraded	46		100	Improved lecturing leading to production of quality	→			MOHE TTIs / Planning and Development		
8.3 Enhanced equity in TEVET	8.3.1. Enhance the TEVET bursary scheme to support vulnerable or from disadvantaged groups	Number of OVC receiving TEVET bursaries	% increase in access to TEVET bursary support	2784		3,000	Improved quality of life of OVC and participation in national affairs	→			MOHE DVET/ Planning and Development	GRZ	
8.4 Improved management of TEVET	8.4.1. Strengthen the regulatory functionalities of TEVETA as a way of maintaining and improving quality & credibility.	TEVET Policy and Act reviewed	Regulatory and legal framework strengthened	1996 TEVET Policy in place		Reviewed TEVET Policy and Act in place	Regulatory and legal requirements developed	→			MOHE TEVETA/Planning and Development	GRZ	
	8.4.2. Operationalise the Skills Development Fund	Number of training institutions accessing support from the skills development fund	Financing to TEVET as % of the national budget increased	10		25	Report on status of TEVET financing mechanisms produced	→			MOHE TEVETA/Planning and Development	GRZ	
	8.4.3. Improve MIS on skills development	Launch TEVET Management Information System	Availability of key data	0		TEVET Management Information System launched	Report on status of MIS produced				MOHE TEVETA/Planning and Development	GRZ	
	8.4.4 Create a TEVET financial simulation model	Development of the model	Ability to program financial requirements	0		1	Simulation / Costing Model in Place				MOHE TEVETA/Planning and Development		
	8.4.5 Improve linkages between skills training institutions and industry	Number of TEVET institutions linked to industry	% Increase in apprenticeships/work-based learning	Work-based framework under development		0	Work-based framework in place	Report on status of TEVET institutions' collaboration with industry produced	→			MOHE TEVETA/Planning and Development / Industry	GRZ/Private Sector
	8.4.6 Enhance vocational pathway to optimise linkage between Secondary education and TEVET	Number of TEVET institutions linked to secondary schools	% of learners at secondary school level accessing training through the vocational pathway	8,000		financing strategy in place	Report on status of linkages of Secondary education & TEVET produced	→			MOHE/MOHE TEVETA/Planning and Information / Planning and Development	GRZ	

Annex 4. COSTING OF THE ESSP IMPLEMENTATION PLAN

1. Early Childhood Education (ECE): Improved ECE for 5-6 year old's										
Strategic Objective	Activities	Output unit	Number of units (by 2021)	Unit Cost (ZMW)	Annual cost (ZMW)			Total cost (ZMW)	Data source	Notes
					2019	2020	2021			
1.1 Improved access to ECE for 5-6 years olds	1.1.1 Creation of ECE centres	Community centres	3,048	180,000	182,880,000	182,880,000	182,880,000	548,640,000	MoGE/ZEPIU	
		ECE annexed	1,526	300,000	152,600,000	152,600,000	152,600,000	457,800,000		
		ECE Zonal	2,060	300,000	206,000,000	206,000,000	206,000,000	618,000,000		
		District centres	-	790,000	0	0	0	0		
		Centres of excellence	60	1,200,000	24,000,000	24,000,000	24,000,000	72,000,000		
		Pilot centres	2	100,000	66,667	66,667	66,667	200,000		
1.2 Improved quality of ECE	1.2.1 Equip ECE teachers with appropriate skills & practices	Teacher equipped with appropriate skills & practices	2,144	12,000	8,576,000	8,576,000	8,576,000	25,728,000	MoGE/ECE	Training.
	1.2.2 Provide suitable kits for indoor & outdoor play activities	Centres with Kits	4,032	150,000	201,600,000	201,600,000	201,600,000	604,800,000	MoGE/ECE	1 kit per centre, for centres of excellence, district, annexed & zonal. Kit comprises all equipment for the centres.
	1.2.3 Provide suitable TLM	TLM set per learner	449,702	14	2,098,609	2,098,609	2,098,609	6,295,828	Simulation model	According to IP, 70% of centres should receive TLM. Average unit cost includes cost of TLM for CSEN.
	1.2.4 Implement school readiness assessment	Centres applying school readiness assessment	4,032	100	403,200	403,200	403,200	1,209,600	MoGE/ECE	
	1.2.5 Implement child developmental milestone assessment	Implemented assessment	n/a						MoGE/ECE	No significant cost.
	1.2.6 Establish transition management mechanism from ECE to Grade 1	Dissemination meetings	123	30,000	1,845,000	1,845,000		3,690,000	MoGE/ECE	1 National, 10 Provincial, 112 District meetings; average cost per meeting = 30,000
	1.2.7 Enhance the implementation of the standardised teacher training strategy	Module developed	5	20,000	100,000			100,000	MoGE/ECE	5 modules to be developed by national technical teams (3 experts per team)
	1.2.8 Strengthen the implementation of ECE CPD Strategy	ECE CPD Strategy	n/a							Training teachers in use of modules (activity 1.2.1)
	1.2.9 Develop a mechanism to expand the supply of ECE teachers	Mechanism to expand the supply of ECE teachers	n/a							Mechanisms to be developed by MoGE; no additional cost implications.
	1.2.10 Provide mechanism for engagement/hiring of care givers	Mechanism established	n/a							
1.3 Enhanced equity in ECE provision	1.3.1 Strengthen & expand School Feeding Programme	Feeding per learner per year	285,000	132	11,286,000	18,810,000	37,620,000	67,716,000	MoGE/DPI	- Indicative costs, not taking account of inflation or increased enrolments - All centres will have school feeding programs in 2021; 30% in 2019; 50% in 2020 - .66 ZMW per learner, 5 days/week, 40 weeks/year = 132 ZMW/learner/year
	1.3.2 Strengthen & expand WASH programme	WASH facility (1 per centre)	4,032	15,000	12,096,000	24,192,000	24,192,000	60,480,000		Mapping exercise required to determine needs. Estimated average cost per center = 15,000.
	1.3.3 Integrate CSEN programs	Zonal hub	847	75,880	21,423,453	21,423,453	21,423,453	64,270,360		Screening (audio & visual testing) equipment provided to Zonal hubs.
1.4. Enhanced efficiency in ECE delivery	1.4.1 Develop clear strategy for financing universal ECE	Strategy	1	100,000	100,000			100,000		Cost of consultant and validation workshop.
	1.4.2. Ensure quality data collection on ECE	n/a								Included in MSS activity 6.1.5; Coordination between ECE & EMIS is essential; ECE needs to communicate full list of centres to EMIS.
	1.4.3. Improve assessment of the needs of CSEN in ECE	CSEN assessment tool	n/a							Part of activities 1.2.5 & 1.3.3
	1.4.4 Sensitise the public on community & private driven establishment of ECE centres	Advocacy campaign to stimulate demand	2	125,000	125,000	125,000		250,000		
	1.4.5. Devise mechanisms for multi-sectoral collaboration to support ECE	Meetings	n/a							4 inter-sectoral meetings per year at national, provincial & district levels.
	1.4.6. Develop guidelines on the establishment of community & private ECE centres	Dissemination meetings	123	30,000	1,845,000	1,845,000		3,690,000		Drafting is completed; dissemination will occur through meetings held at national, provincial & district levels. Average cost per meeting = 30,000.
	1.4.7. Advocacy programs at all levels on the concepts and benefits of ECE	Meetings	n/a							Included in advocacy campaign, activity 1.4.4
TOTAL COST, ECE =								2,534,969,788		

2. Improved Primary Education (PE)

Strategic Objective	Activities	Output unit	Number of units (by 2021)	Unit Cost (ZMW)	Annual cost (ZMW)			Total cost (ZMW)	Data source	Notes		
					2019	2020	2021					
2.1 Improved access and internal efficiency	2.1.1 Build more classrooms	Classroom: community mode (100%)	32,567	70,000	759,896,667	759,896,667	759,896,667	2,279,690,000	Simulation model	All classrooms to be built using community mode.		
		Classroom: contractor mode (0%)		250,000								
		2.1.2 Nation-wide rollout of the Catch-Up programme to reduce repetition & re-integrate OOSC	Teacher trained in catch-up program	61,225	8,000	163,266,667	163,266,667	163,266,667	489,800,000		MoGE/DPI	Implemented in 2 provinces.
		2.1.3 Devise mechanism to mitigate the growing number of OOSC	Mechanism	1	100,000	100,000			100,000		MoGE/DPI	
		2.1.4 Develop a mechanism to promote age appropriate grade 1 intake	Mechanism	1	100,000	100,000			100,000		MoGE/DPI	Cost of consultant and validation workshop.
		2.1.5 Develop Framework for fast tracking education & flexible curriculum for the over-aged	Framework	1	100,000	100,000			100,000		MoGE/DPI	
2.2 Improved quality of primary education	2.2.1 Enhance the head teacher leadership & management skills with focus on pedagogical leadership competencies	Head teacher trained	8,500	5,000	14,166,667	14,166,667	14,166,667	42,500,000	MoGE/DPI	Orientation workshops, including materials		
		Trained teacher	78,100	6,000	156,200,000	156,200,000	156,200,000	468,600,000		Materials are ready, but not printed.		
	2.2.2 Expand targeted reading & numeracy interventions in PE	Teacher trained to use NAF	78,100	6,000	156,200,000	156,200,000	156,200,000	468,600,000				
	2.2.4 Implementation of TaRL mechanism for the teaching of foundation literacy & numeracy	District training	103	65,500		3,373,250	3,373,250	6,746,500		- TaRL = Teaching at the Right Level; - G34liot underway in 12 districts; to be generalized to 103 districts.		
	2.2.5 Enhance implementation of school based formative assessment	Strategy	1	100,000	100,000			100,000		Cost of consultant and validation workshop.		
	2.2.6 Development of TLM	Subject	61	200,000	4,066,667	4,066,667	4,066,667	12,200,000	MoGE/DSC	New textbook for every subject so that MoGE will have copyright. Cost covers workshops, stationary % trialing, 35 subjects for the 7 grades.		
		Pupil	11,329,384	20	75,529,228	75,529,228	75,529,228	226,587,688	Simulation model	Number of pupils over 3 year period. Includes equipment. Average unit cost includes cost of TLM for CSEN.		
2.3 Enhanced equity in primary education provision	2.3.1. Strengthen & expand School Feeding Programme & WASH	School feeding: G1-7 student	9,019,281	19.02	57,182,242	57,182,242	57,182,242	171,546,725	Simulation model	The unit cost in the model (Tab: "Non PE") is per student; it is 18 for 2019, 19 for 2020 & 20 for 2021. The weighted average is 19.02		
		WASH program (1 per school)	6,000	35,000	70,000,000	70,000,000	70,000,000	210,000,000				
	2.3.2 Develop mechanisms to increase retention of girls in rural areas	Mechanism	1	100,000	100,000			100,000			Cost of consultant and validation workshop.	
	2.3.3 Formulate mechanisms to raise the performance amongst girls in rural areas	Mechanism	1	100,000	100,000			100,000			Cost of consultant and validation workshop.	
TOTAL COST, Prim Ed =								4,376,870,909				

3. Secondary Education (SE)

Strategic Objective	Activities	Output unit	Number of units (by 2021)	Unit Cost (ZMW)	Annual cost (ZMW)			Total cost (ZMW)	Data source	Notes	
					2019	2020	2021				
3.1 Improved access to secondary education	3.1.1. Strengthen evidence based allocation of school infrastructure	School map workshops	10	145,000		1,450,000		1,450,000	MoGE/DPI	School mapping is underway with ZEEP to produce tool. Workshops for training are needed; 1 per province.	
	3.1.2. Build more classrooms in existing schools	Classrooms (100% community mode)	20,824	100,000	694,145,443	694,145,443	694,145,443	2,082,436,328	Simulation model	Period 2019-21; according to the model. Unit cost is for 2015, according to model, adjusted for community mode. May need to increase it by rate of inflation.	
	3.1.3. Construction of standard low cost model secondary schools closer to the communities	Standard low cost secondary school close to community	130	3,500,000	1,166,667	1,166,667	1,166,667	3,500,000	MoGE/DPI		
	3.1.4. Strengthen use of alternative modes in the provision of secondary education	Secondary school	500	100,000	16,666,667	16,666,667	16,666,667	50,000,000	MoGE/DPI, AMEP	Training, linkage to AMEP portal	
	3.1.5. Construction of Girls Secondary Schools	Girls' secondary school	20	3,500,000	23,333,333	23,333,333	23,333,333	70,000,000	MoGE/DPI		
3.2 Improved quality of secondary education	3.2.1 Ensure that head teacher supervision is applied appropriately to increase teacher's interactions with learners	Trained head teacher	900	5,000	1,500,000	1,500,000	1,500,000	4,500,000	MoGE/DPI, TESS		
	3.2.2 Improve equitable recruitment & deployment of teachers especially those STEM	Mechanism for recruitment	1	100,000	100,000			100,000	MoGE/HRI, DPI	Cost of consultant and validation workshop	
	3.2.3 Strengthen the use of learning assessments in SE as guided by the NAF	Teacher trained in use of NAF	28,000	6,000	56,000,000	56,000,000	56,000,000	168,000,000			
	3.2.4 Development of TLM	Subject		140	30,000	1,400,000	1,400,000	1,400,000	4,200,000	MoGE/DSC	New textbook for every subject so that MoGE will have copyright. Cost covers workshops, stationary & trialing. 140 subjects for the 5 grades.
			TLM per Pupil		1,365,000	40	18,200,000	18,200,000	18,200,000	54,600,000	Simulation model
3.2.5 Provision of TLM	Equipment, overall	300	3,000,000	300,000,000	300,000,000	300,000,000	900,000,000	MoGE/DSC			
3.3 Enhanced equity in secondary education provision	3.3.1 Enhance implementation of comprehensive sexuality education (CSE).	Trained teacher	5,000	5,600	9,333,333	9,333,333	9,333,333	28,000,000	MoGE/DSC	Other grades completed & teachers being trained. UNESCO facilitated. Unit cost includes development & printing. Note that Grade 7 is for primary school.	
		Textbook for Grade 7	365,000	20.5	7,482,500			7,482,500			
		Textbook for Grade 12	111,941	20.5	2,294,791			2,294,791			
	3.3.2 Work with stakeholders for the provision of dormitories for weekly boarding or safe houses	Strategy for providing safe boarding facilities	1	100,000	100,000			100,000		Cost of consultant and validation workshop.	
	3.3.3 Improve the management of the scholarship & bursary schemes for vulnerable learners	Strategy for planning & management of bursary program	1	100,000	100,000			100,000		Cost of consultant and validation workshop.	
3.3.4. Conduct research to understand why girls are dropping out of school even with targeted interventions in place	Research study	1	100,000	100,000			100,000		Cost of consultant and validation workshop.		
3.3.5 Research on why CSEN drop-out of secondary school	Research study	1	100,000	100,000			100,000		Cost of consultant and validation workshop.		
3.4 Improved efficiency of secondary education	3.4.1. Enhance education leadership & management using the Zambia Education Management Tool (ZEMT)	Trained head teacher	900	5,000	1,500,000	1,500,000	1,500,000	4,500,000	MoGE/DPI, TESS		
TOTAL COST, Sec Ed =								3,381,463,619			

4. Alternative Modes of Education Provision (AMEP)

Strategic Objective	Activities	Output unit	Number of units (by 2021)	Unit Cost (ZMW)	Annual cost (ZMW)			Total cost (ZMW)	Data source	Notes
					2019	2020	2021			
4.1 Increased access to education of the OOSC, youth & adults through use of technology	4.1.1 Devise strategy to reach reach OOSC, youth & adults	Strategy	1	100,000	100,000			100,000		Cost of consultant and validation workshop (with UNICEF).
	4.1.2 Establish national e-learning portal	Portal	1	240,000	240,000			240,000	MoGE/AMEP	
	4.1.3 Equip Kitwe studios with appropriate transmission equipment	Fully equipped & functional studio	1	6,000,000	6,000,000			6,000,000	MoGE/AMEP	
	4.1.4. Develop and/or upload e-content (including OERs) on National E-Learning Portal or platform	e-content, entire package	1	24,000,000	8,000,000	8,000,000	8,000,000	24,000,000	MoGE/AMEP	For all levels, from ECE to tertiary.
	4.1.5 Re-equip Zacode college with appropriate materials	Fully equipped & functional Zacode	1	20,000,000	6,666,667	6,666,667	6,666,667	20,000,000	MoGE/AMEP	
	4.1.6. Equip Skills centres & schools for continuing education with appropriate ICT infrastructure & equipment	Equipped skills center	25	400,000	10,000,000			10,000,000	MoGE/AMEP	
		Equipped SFCE	13	1,538,462	6,666,667	6,666,667	6,666,667	20,000,000	MoGE/AMEP	
	4.1.7 Establish an AMEP center of excellence	Center established & functional	1	2,000,000	2,000,000			2,000,000	MoGE/AMEP	
4.1.8 Digitization of existing teaching & learning materials	All materials digitised	1	50,000,000	16,666,667	16,666,667	16,666,667	50,000,000	MoGE/AMEP	Digitalized & made accessible to learners	
4.2 Improved quality of AMEP	4.2.1 Develop standard self-instructional study modules	Module developed	13	n/a					MoGE/AMEP	
		Module copy	20,000	80	6,933,333	6,933,333	6,933,333	20,800,000	MoGE/AMEP	
	4.2.2 Staff capacity building for the development of electronic & digital content	Staff trained	30	4,000	120,000			120,000	MoGE/AMEP	
4.2.3 Development of assessment & certification for AMEP aligned to other certification bodies	Assessment & certification instrument	1	4,000,000	4,000,000			4,000,000	MoGE/AMEP	Workshops & servers; in conjunction with ECZ.	
4.3 Enhanced equity in AMEP	4.3.1 Provide bursary support to disadvantaged students	Learners	30,000	3,000	30,000,000	30,000,000	30,000,000	90,000,000	MoGE/AMEP	
	4.3.2 Develop AMEP TLM for CSEN	TLM set	1,000	2,000	666,667	666,667	666,667	2,000,000	MoGE/AMEP	Out of school children with special needs.
4.4 Improved efficiency of AMEP	4.4.1 Increase awareness of benefits of AMEP through Information, Education & Communication (IEC) framework	IEC framework	1	5,000	5,000			5,000	MoGE/AMEP	Development of framework & campaign to develop awareness. Each year in different provinces.
		Campaign	1/year	200,000	200,000	200,000	200,000	600,000	MoGE/AMEP	
	4.4.2. Build institutional capacity in the management, monitoring & evaluation of AMEP programmes	AMEP staff member trained	30	4,000		120,000		120,000	MoGE/AMEP	
4.4.3. Development of AMEP implementation framework	Framework	1	100,000	100,000			100,000	MoGE/AMEP	Cost of consultant and validation workshop (with UNICEF).	
TOTAL COST, AMEP =								250,085,000		



5. Teacher Education and Specialised Services (TESS)

Strategic Objective	Activities	Output unit	Number of units (by 2021)	Unit Cost (ZMW)	Annual cost (ZMW)			Total cost (ZMW)	Data source	Notes
					2019	2020	2021			
5.1 Improved access to teacher education	5.1.1 Improve & expand facilities for practical & specialised subjects (STEM) through innovative approaches	Science labs	21	3,500,000				73,500,000	MoGE/TESS	- 5 of the 12 colleges are currently offering STEM; 7 will be upgraded for STEM. - unit is individual lab, workshop, etc. - for TLM, unit is college
		ICT labs	24	5,000,000				120,000,000		
		Tech/specialized workshops	14	4,500,000				63,000,000		
		TLM & equipment	12	3,600,000				43,200,000		
	5.1.2 Establishment of centres of excellence, colleges of education in STEM and ECE	STEM centre of excellence college	1	6,000,000				6,000,000	MoGE/TESS	1 new college for each
		ECE centre of excellence college	1	3,000,000				3,000,000	MoGE/TESS	
5.1.3 Construct CSEN user friendly schools and/or provide facilities for CSEN at already existing schools	CSEN school	5	3,000,000				15,000,000	MoGE/TESS	Finish off the 2 under construction + 3 new	
5.2 Improved quality of teacher education	5.2.1 Strengthen the capacity of colleges of education to implement the aligned teacher education curriculum	Lecturer trained	108	6,160	221,760	221,760	221,760	665,280	MoGE/TESS	Workshops (facilitators: 10% additional)
	5.2.2 Strengthen teacher preparation & CPD strategies	Head of department/head of section/senior teacher trained	33,592	6,160	68,975,573	68,975,573	68,975,573	206,926,720		Workshops (facilitators: 10% additional)
		CPD coordinator trained	1,184	3,190	1,258,987	1,258,987	1,258,987	3,776,960		Workshops (facilitators: 10% additional)
	5.2.3 Strengthening teaching of STEM subjects to CSEN	Trained teacher for the blind	60	10,120	303,600	303,600		607,200		2 10 day workshops for each teacher
	5.2.4 Development of teacher Professional standards	Provincial workshop	10	135,000	1,350,000			1,350,000		- Under development with UNESCO - Costs for dissemination
5.3 Enhanced equity in teacher education	5.3.1 Strengthen the capacities to provide guidance & counselling services for the serving lecturers	College lecturers equipped with guidance & counselling skills	24	6,160	147,840			147,840		Workshops (facilitators: 10% additional)
	5.3.2 Strengthen the capacities to provide guidance & counselling services for the serving teachers	Serving teacher trained in guidance & counselling	9,500	6,160	19,506,667	19,506,667	19,506,667	58,520,000		
	5.3.3 Formulate education framework for CSEN	Framework	1	100,000	100,000			100,000		Cost of consultant and validation workshop.
5.4 Improved efficiency of teacher education	5.4.1 Enhance the system to enrol student teachers based on national teacher demands	Mechanism to enrol student teachers based on national teacher demands developed	1	100,000	100,000			100,000		Cost of consultant and validation workshop.
	5.4.2 Conduct capacity building activities for resource centre coordinators on education leadership & management	Trained resource centre coordinator	1,184	6,160	2,431,147	2,431,147	2,431,147	7,293,440		
	5.4.3 Conduct capacity building activities for college managers on education leadership & management	Trained college manager	24	12,320	147,840		147,840	295,680		Workshops (facilitators: 10% additional)
	5.4.4 Develop library service policy framework	Framework	1	100,000	100,000			100,000		
	5.4.5 Establish strategy to promote reading culture	Strategy	1	100,000	100,000			100,000		Cost of consultant and validation workshop.
TOTAL COST , TESS =								603,683,120		

6. Management and Support Services (MSS)

Strategic Objective	Activities	Output unit	Number of units (by 2021)	Unit Cost (ZMW)	Annual cost (ZMW)			Total cost (ZMW)	Data source	Notes
					2019	2020	2021			
6.1 Effective governance, planning & management at all levels	6.1.1 Provide the required infrastructure for education management in districts	District office created	42	1,200,000	16,800,000	16,800,000	16,800,000	50,400,000	MoGE/DPI	
	6.1.2 Formulate a comprehensive capacity development strategy, structures, salary grades & related incentives for efficient organisation & effective service delivery	Institutional audit/analysis → strategy	1	6,000,000	3,000,000	3,000,000		6,000,000	MoGE/DPI	
		Strategy	1	315,000	315,000			315,000		
	6.1.3 Formulate clear financing strategy for all the subsectors	Strategy	1	1,254,000	627,000	627,000		1,254,000		
	6.1.4 Formulate strategy for effective evidence based linkages between policy, planning & budgeting to foster sector outcomes	Strategy	1	1,254,000	627,000	627,000		1,254,000		
	6.1.5 Strengthen & automate the management information system	EMIS upgrade	1	72,000,000	24,000,000	24,000,000	24,000,000	72,000,000		- including equipment, training - ZEEP does not include equipment
	6.1.6 Strengthen & decentralise staff recruitment & placement system	Strategy	1	4,500,000	4,000,000	500,000		4,500,000		Involves 10 provincial & 2 national meetings
	6.1.7 Strengthen legal, regulatory & policy environment	Workshop	11	150,000	1,650,000			1,650,000		- Dissemination workshops required
	6.1.8 Establish frameworks for public financial management, effective procurement, HR systems and robust institutional leadership development plans	Public financial management framework	1	100,000		100,000		100,000		Activity 6.1.2 will provide the analytical basis for these frameworks. This activity will consist of "translating" the results of 6.1.2 into concrete frameworks. Costs cover short consultancy + validation.
		Procurement framework	1	100,000		100,000		100,000		
		HR systems framework	1	100,000		100,000		100,000		
		institutional leadership plan framework	1	100,000		100,000		100,000		
	6.1.9 Enhance the ability of the system to recruit the trained teachers needed & with the skills needed	Strategy (guidelines) for responding to demand for teachers	1	200,000	100,000	100,000		200,000		Cost of consultant & validation workshops.
6.2 Effective management of pedagogical functions	6.2.1 Establish a memorandum of understanding between general education schools & TEVET institutions on vocational programmes, teachers & facilities	Memorandum of Understanding	1	n/a						In-house
	6.2.2 Delink standards from administration			n/a						In-house
	6.2.3 Enhance institutional & teacher monitoring & inspection	Mechanism for monitoring & inspection of teachers & institutions	1	112,000	112,000			112,000		- Guidelines exist that outline on the content of monitoring & inspection. Mechanism concerns how they will be organized and implemented. - Meetings to review mechanisms.
	6.2.4 Develop framework for teacher management	Framework	1	20,000		20,000		20,000		- Take into account activity 6.1.2 & other studies - Consultancy & validation
	6.2.5 Develop framework for supervision & support at points of education delivery	Framework	1	224,000	224,000			224,000	MoGE/DSC	- Review ongoing & planned activities that comprise supervision & support to ensure effective coordination - Consultative meeting; framework drafted in-house
	6.2.6 Formulate strategy for procuring, distributing & utilisation of TLM	Strategy	1	1,700,000					MoGE/DPI	To be implemented in 2019, funded by ZEEP.
	6.2.7 Develop strategies to reduce imbalances in the allocation of teachers by gender, rural/urban	Strategy		n/a						See activity 6.1.6
	6.2.8 Provision of alternative modes of providing teacher accommodation	Housing unit	8,478		571,961,476	555,339,184	568,251,611	1,695,552,271	Simulation model	Taken from simulation model estimates for staff houses
	6.2.9 Establish mechanisms for identification of best practices in education delivery from national & international experience	Mechanism	1	200,000	100,000	100,000		200,000		- Consultancy; - Participation in ADEA information sharing activities.
	6.3 Removing barriers to access quality education	6.3.1 Strengthen home-grown school feeding programs	Management support framework	1	810,000	405,000	405,000		810,000	
6.3.2 Develop minimum standards for WASH		Standards	1	100,000	100,000			100,000		Cost of consultant and validation workshop.
TOTAL COST , MSS =								1,833,737,271		



7. University Education

Strategic Objective	Activities	Output unit	Number of units (by 2021)	Unit Cost (ZMW)	Annual cost (ZMW)			Total cost (ZMW)	Data source	Notes
					2019	2020	2021			
7.1 Improved access to University Education	7.1.1 Increase numbers of students enrolled in public (& private) universities	Student in public university	160,000	23,493	1,130,909,984	1,244,000,982	1,379,710,180	3,754,621,147	MoHE	- About 40% of university costs financed by student fees; unit costs refer to government costs only. - Costs based on estimated projected enrolments for 2019-21.
	7.6.2 Enhance private sector participation in the provision of higher education	Private university (which is registered & regulated by Higher Ed Authority)	85	34,733	2,431,333	2,952,333	3,473,333	8,857,000		- Currently 60 private universities; expect 100 by 2021 - Number of units = average number of private universities for each year. - Cost is for grant to the Higher Education Authority, which is responsible for registration & regulation of private universities.
7.2 Improved quality of University Education	7.2.1 Enhance research capacity in universities	Equipped research laboratory	15	2,000,000	10,000,000	10,000,000	10,000,000	30,000,000	MoHE	Covered by grant to universities. Universities have a staff development fund.
	7.2.2 Enhance industry responsive curriculum development & review based	Curriculum reviewed/developed	100	n/a						
	7.2.3 Enhance the qualifications of lecturing staff	Lecturer with upgraded qualifications/ skills	100	80,000	2,666,667	2,666,667	2,666,667	8,000,000		
7.3 Enhanced equity in University Education	7.3.1 Enhance the loans & bursary scheme to support students, especially those that are vulnerable or from disadvantaged groups	OVC receiving loan or bursary	54,000	30,944	557,000,000	557,000,000	557,000,000	1,671,000,000	MoHE	Covers tuition & upkeep.
7.4 Improved management of university education	7.4.1 Strengthen the regulatory functionalities of the Higher Education Authority & ZAQAs as a way of maintaining & improving quality and credibility.	Annual lump-sum cost	1	10,000,000	3,333,333	3,333,333	3,333,333	10,000,000	MoHE	- Cost implications = additional staff, equipment, operations - Estimated at 5,000,000 for each
	7.4.2 Create an enabling environment for innovative ways of funding universities	Mechanism for sustainable financing for public universities	1	n/a	-	-	-	-		Strategy has been developed and approved by Cabinet.
	7.4.3 Creation of a management information system for higher education	Completed Higher Education MIS	1	3,000,000	1,500,000	1,500,000	-	3,000,000		
	7.4.4 Creation of a financial simulation model for university education	Completed financial simulation model	1	1,000,000	500,000	500,000	-	1,000,000		
					TOTAL COST, Univ Ed =			5,486,478,147		

8. Skills Development (TEVET)

Strategic Objective	Activities	Output unit	Number of units (by 2021)	Unit Cost (ZMW)	Annual cost (ZMW)			Total cost (ZMW)	Data source	Notes
					2019	2020	2021			
8.1 Improved access to TEVET	8.1.1 Increase the number of students enrolled in TEVET	Learner enrolled in public TEVET institution	142,000	5,750	258,746,371	270,246,209.37	287,495,967	816,488,547	MoHE	Current enrolment = 43,000; projected for 2021 at 50,000
	8.1.2 Enhance private sector participation in the provision of skills training	Framework for apprenticeship/work-based learning	1	500,000	250,000	250,000		500,000	MoHE	Includes guidelines for apprenticeship, learnerships, internships, & placement.
8.2 Improved quality of TEVET	8.2.1 Enhance capacity of training institutions	Equipped training workshop	25	1,500,000	12,500,000	12,500,000	12,500,000	37,500,000	MoHE	
	8.2.2 Enhance industry responsive curriculum development & review based on tracer studies & discussion with industry	Curriculum reviewed/developed	300	n/a					MoHE	Within the grant to TEVETA
	8.2.3 Enhance the qualifications of lecturing staff	Lecturer undergoing qualifications upgrade	100	40,000	1,333,333	1,333,333	1,333,333	4,000,000	MoHE	
8.3 Enhanced equity in TEVET	8.3.1 Enhance the TEVET bursary scheme to support vulnerable or disadvantaged groups	OVC receiving TEVET bursary	8,700	6,466	18,103,448	18,750,000	19,396,551.72	56,250,000	MoHE	
8.4 Improved management of TEVET	8.4.1 Strengthen the regulatory functionalities of TEVETA as a way of maintaining & improving quality & credibility.	TEVET Policy and Act reviewed	1	n/a					MoHE	A policy review.
	8.4.2 Operationalise the Skills Development Fund	Training institution receiving support from skills development fund	30	6,720,000	181,440,000	188,160,000	201,600,000	571,200,000	MoHE	
	8.4.3 Improve MIS on skills development	TEVET MIS	1	3,000,000	1,500,000	1,500,000		3,000,000	MoHE	
	8.4.4 Create a TEVET financial simulation model	TEVET financial simulation model	1	1,000,000	500,000	500,000		1,000,000	MoHE	
	8.4.5 Improve linkages between skills training institutions & industry	TEVET institution linked to industry	30	n/a					MoHE	
	8.4.6 Enhance vocational pathway to optimise linkage between Secondary education & TEVET	TEVET institution linked to secondary schools	15	4,000,000	20,000,000	20,000,000	20,000,000	60,000,000	MoHE	The IP has nothing for output. Would there be a cost?
					TOTAL COST, TEVET =			1,549,938,547		



Annex 5. ESSP STRATEGIC AREAS BY SUB-SECTOR AND BY PRIORITY THEMES

Strategies, interventions and outcomes for the four priority themes

ECE

The ESSP will prioritize the following key strategic areas for ECE:

- Create new ECE centres;
- Establish low-cost community-based ECE centres
- Provide suitable play and suitable learning materials
- Strengthen PPP in provision of ECE
- Implement school readiness assessment; and
- Develop quality data collection on ECE.

Key interventions	Progress Indicator (outputs)	Target 2021
<u>Access</u>		
Establish more suitable ECE centres	Number of ECE centres/Number of ECE learners	7,348 (ECE centres), 338, 000 learners
	Proportion of Grade 1 entrants with ECE experience	50% of grade 1 entrants with ECE experience
Alternative mode of ECE provision	Number of centres provided with Alternative mode of ECE	20 ECE centres – Alternative mode of ECE provided
<u>Quality</u>		
Provide suitable TLM	Proportion of centres with appropriate TLM	70% of ECE centres
Provide age appropriate indoor and outdoor play materials	Proportion of centres with appropriate indoor and outdoor play materials	70% of ECE centres
Implement school readiness assessment	Number of ECE centres applying school readiness assessment	7,348
Implement child developmental milestone Assessment	Status report on the Implementation of child developmental milestone Assessment	Child developmental milestone Assessment implemented and results disseminated
Establish smooth transition management mechanism from ECE to Grade 1	Status report on the development of transition mechanism from ECE to Grade 1	Transition mechanism established and being implemented
Enhance the implementation of the standardised teacher training strategy	Status report on the implementation of the standardised teacher training strategy	Standardized teacher training strategy implemented
Strengthen the implementation of ECE CPD Strategy	Status report on implementation of ECE CPD Strategy	ECE CPD Strategy for in-service implemented
Develop a mechanism to expand the supply of ECE teachers	Status report on development of a mechanism to expand supply of ECE teachers	1,500 ECE teachers supplied
Provide mechanism for engagement of caregivers	Status report on the development of mechanism for engagement of caregivers	2000 ECE caregivers engaged

Key interventions	Progress Indicator (outputs)	Target 2021
Equity		
Strengthen and expand School Feeding Programme	Number of ECE centres with school feeding facilities	All ECE centres have feeding
Strengthen and expand WASH	Number of ECE centres with adequate WASH facilities	All ECE centres have WASH facilities
Integrate CSEN programmes in ECE	Number of children screened for early identification and referred to specialized services	All enrolled ECE children screened for early identification
Efficiency		
Develop clear costed strategy for financing universal ECE	Strategy for financing universal ECE	Financing strategy (1) in place
Develop quality data collection systems on ECE	Integrate ECE data collection into MOGE EMIS	All (7,348) ECE centres providing information for EMIS
Develop guide lines on the establishment of community and private ECE centres	Status on guidelines for establishment of community and private ECE centres	Guidelines for establishment of community and private ECE centres developed and implemented
Sensitise the public on community and private driven establishment of ECE centres	Status report on the establishment of community and private ECE centres	1 National, 10 Provincial and 109 districts sensitization meetings on community and private driven establishment of ECE centres
Devise mechanisms for multisectoral collaboration to support ECE	Multi-stakeholder support mechanisms	Multi-stakeholder support mechanisms developed
Advocacy programmes at all levels on the concepts and benefits of ECE	Status report on Advocacy programmes	At least three Advocacy programmes conducted at each of the following: provincial, district and community levels

Primary Education

The ESSP will prioritize the following key strategic priority areas for primary education:

- Develop a mechanism to ensure appropriate-age enrolment in PE and to remove repetition;
- Develop strategy to reduce distortions in the allocation of teachers by gender and rural and urban

Key interventions	Progress Indicator (outputs)	Targets (2021)
Access		
Develop mechanisms to ensure age-appropriate enrolment in PE and to remove repetition;	Mechanisms for age-appropriate enrolment and removal of repetitions	<ul style="list-style-type: none"> • Raise the NIR from 56.7% to 100 % NIR (All eligible children of the school-entry age enrolled in school) • Reduce repetition from 6.7% to less than 4%
Develop Framework for fast-tracking education for the over-aged	Status of Framework to fast-track education for the over-aged	Framework developed and being implemented All the overaged enrolled in the fast-track programme 218,477 (43.93%) over-aged enrolled 44,928 (9.03%) under-aged

Quality

Enhance head teacher supervision and leadership skills to increase learning outcomes	Number of head teachers trained on ZEMT	100% Head teachers in primary education have ZEMT experience
Expand targeted reading and numeracy interventions in PE	Number of primary schools implementing reading and numeracy in G1–4	All primary schools have reading and numeracy interventions for G1–4
Devise mechanisms to strengthen the teaching of foundation literacy and numeracy	Proportion of teachers upskilled	80% of the teachers for G1–4 upskilled in teaching foundation literacy and numeracy
Nationwide rollout of the Catch-Up Programme	Number of schools delivering Catch-Up Programme	All primary schools
Equity		
Strengthen and expand school feeding programmes	% of PE schools with school feeding	25% coverage of school feeding in primary 100% School feeding programme 100% Deworming
Strengthen and expand school WASH	% of primary schools with adequate WASH facilities	20% of school meet MOGE WASH standards 100% WASH 100% MHM
Develop mechanisms to increase retention for girls in rural areas	Status report on development of mechanism	Mechanisms to increase retention for girls in rural areas developed and implemented
	Retention rates for girls	Increase retention rate for girls in rural areas by reducing the dropout rates by 50% - keeping Girls in School (no.) - Provision of sanitary towels (no.) - Private toilets
Formulate mechanisms to raise the performance amongst girls in rural areas	Gender disaggregated performance across critical subject areas by location & gender in Maths, Science & Literacy	Parity in performance in Maths and Literacy across critical subject areas by location and gender We use EGRA/EGMA/ECZ
Develop strategy to reduce imbalances in the allocation of teachers by gender, rural/urban	Strategy to reduce imbalances in the allocation of teachers by gender, rural and urban	Strategy to reduce imbalances in the allocation of teachers by gender, rural and urban in place and implemented

Secondary education

The ESSP will prioritize the following key strategic priority areas for secondary education:

- Increase the number of classrooms in secondary education;
- Improve equitable recruitment and deployment of teachers especially those for Science, Technology and Mathematics (STM); and
- Enhance comprehensive sexuality education (CSE) through guidance and counselling.

Key interventions	Progress Indicator (outputs)	Targets (2021)
Access		
Construction of standard low-cost model secondary schools closer to the communities	Number of standard low-cost model secondary schools	130 schools
Strengthen use of alternative modes in the provision of secondary education	Proportion of secondary schools offering alternative modes of education provision	50% of secondary schools

Quality

Expand the use of learning assessments in SE as guided by NAF	Number of schools using NAF	100% of secondary schools school teachers trained in CSEF
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Equity

Enhance the delivery of comprehensive sexuality education (CSE)	Number of teachers trained in CSE	100% Secondary school teachers trained in CSE
	Baseline survey on CSE conducted	Status report on the implementation of CSE
Work with stakeholders to put up dormitories for weekly boarding or safe houses	Proportion of day secondary schools with dormitories for weekly boarding and/or safe houses	40% of day secondary schools have dormitories
	Percentage reduction in gender-based violence cases	Reduced by at least 75%

Efficiency

Enhance enforcement of the re-entry policy	Proportion of girls coming back to school	At least 60% girls that got pregnant coming back to school
	Percentage of head teachers complying with re-entry policy	100% compliance
	Number of sensitization sessions on re-entry policy conducted	<ul style="list-style-type: none"> 100% of secondary school head teachers and learners sensitized 10 Provincial sensitization meetings

AMEP/YALE

The ESSP will prioritize the following key strategic priority areas for AMEP:

- Assess, develop and implement sustainable cost-effective CPD AMEP programme;
- Develop alternative modes of education provision;
- Devise mechanism to mitigate the growing number of out-of-school children
- Increase awareness of benefits of AMEP through information, education and communication (IEC) framework; and
- Provide bursary support to disadvantaged students.

Key interventions	Progress Indicator (outputs)	Targets (2021)
Access		
Establish national electronic learning portal for AMEP programmes	No. of national e-Learning Portal	1 National e-Learning Portal established (for increased access to Open Education Resources materials)
Establish technology enabled learning (TEL) centres and equip them with Aptus	No. of TEL centres established and equipped with Aptus	10 centres (one in each province)
Enhance the use of ICT application in delivery of Teaching and Learning	% of AMEP centres with access to computers	At least 50%
	% of AMEP centres with internet connectivity	At least 50%

Procure new TV equipment for Kitwe Studios	No. of studios equipped with new TV equipment	Kitwe studios equipped with new TV equipment.
Digitalize Radio and TV programmes	No. of programmes digitalized	All Radio and TV programmes digitalized

Quality

Develop and upload e-content on National e-Learning Portal	No. of e-Learning content developed and uploaded	72 Radio/TV lessons for ECE (multiplied by 7 local languages)
		72 Radio/TV lessons for lower primary schools (multiplied by 7 local languages)
		8 subjects for each grade from Grades 5 to 7
		14 academic subjects for each grade from Grade 8 to 12
		5 vocational subjects for each grade from Grades 8 to 12
		5 subjects for AMEP programmes
		5 vocational subjects for skills centre
Procure Printing Machine for Zambia College of Distance Education (ZACODE)	No. of Printing Machines procured	One Printing Machine procured
Develop and distribute Study Modules to Open Learning Centres and Schools for Continuing Education	No. of Study Modules developed and distributed.	200,000 study modules developed and distributed from ZACODE to all Open Learning and Distance Education centres
Equip skills development centres	No. of skills development centres equipped	13 skills centres equipped (enhanced skill development)
Develop assessments and certification for AMEP aligned to the main stream curriculum assessment	Assessment and certification for AMEP developed	Assessments and certification for AMEP developed
Domesticate regional and international ODL quality assurance mechanisms and protocols through stakeholder engagement	SADC regional open and distance learning quality assurance guidelines domesticated	SADC regional open and distance learning quality assurance guidelines domesticated and being used

Equity

Enhance bursary support to OVCs	Proportion of OVC learners on AMEP programmes on bursary	At least 30%
Produce AMEP TLM for CSEN	AMEP TLM produced and being used	Status of AMEP TLM

Efficiency

Build institutional capacity in the provision and monitoring of AMEP	Proportion of AMEP providers and managers trained	At least 75%
Development of AMEP implementation framework	Framework on AMEP developed	Strategic operational framework developed and operationalized
Increase awareness of benefits of AMEP through IEC framework	Approval status of IEC framework	Information, education communication (IEC) framework developed and operationalized

Teacher Education and Specialized Services

The ESSP will prioritize the following key strategic activities for teacher education, management and specialized services:

- Improve responsiveness of teacher education to curriculum evolution.
- Streamline the provision of teacher education so that it is responsive to national needs; and
- Enhance efficiency and effectiveness of specialized services.

Key interventions	Progress indicator (outputs)	Targets (2021)	
Access			
Improve and expand facilities especially for practical and specialized subjects (STEM)	Number of colleges of education expanded and/or improved	14	
	Number of STEM teachers trained (disaggregated by sex)	10,000 currently there and the target is 14,000	
Establishment of centres of excellence colleges of education in STEM and ECE	Number of centres of excellence colleges of education in STEM and ECE established	One centre of excellence college of education in STEM and one centre of excellence college of education in ECE established	
Quality			
Alignment of teacher education to the curriculum evolution	Status report on teacher education curricula evolution	Status report on alignment of teacher education	
Strengthen teacher education	Status of pre-service, in-service, continuing professional development programmes	Pre-service, in-service, continuing professional development programme strengthened in all colleges of education	
	Availability of mechanisms to strengthen the teaching of foundation literacy and numeracy	All lecturers trained in teaching literacy and numeracy	
	Status of framework for upgrading teacher competence and skills	Framework for upgrading teacher competences and skills developed and being implemented	
	Status report on the review of teaching practice (School experience)	Revised school experience component for student teachers (Lecturers attached to students)	
	Number of student teachers with lecturers attached to them in third year during teaching practice	5,000 students have lecturers attached to them during school experience	
	Number of lecturers trained in learner centred method	All lecturers trained in learner centred teaching methodologies	
		All lecturers trained in research skills	
		10 Zonal resource Centres 109 district and 14 provincial resource centres network	
9,500 serving teachers equipped with guidance and counselling skills			
Mechanism to strengthen the teaching of foundation literacy and numeracy developed	9,500 serving teachers equipped with screening and early identification skills for children with special educational needs		
	Status report on the teaching of foundation literacy and numeracy		

Key interventions	Progress indicator (outputs)	Targets (2021)
Development of teacher professional standards	Teacher professional standards developed	Status report on the development of teacher professional standards
		At least 75% teachers comply
<u>Equity</u>		
Strengthen the capacities of teacher education to provide guidance and counselling services training	Guidance and counselling services strengthened in the curriculum for teacher education	Status of guidance and counselling services in the curriculum for teacher education
		20,000 graduate teachers equipped with guidance and counselling skills
Construct CSEN user friendly schools and/or provide facilities for CSEN at already existing schools	Number of CSEN schools and/or facilities constructed	At least 3 schools for children with special educational needs constructed
Formulate education framework for CSEN	Framework for early identification of CSEN developed	Status report on the transformation of ZAMISE teacher education programme
	ZAMISE teacher education programme transformed to offer pre-service in content with special education programme	Status report on the transformation of ZAMISE teacher education programme
<u>Efficiency</u>		
Enhance the system for enrolling student teachers for teacher education	Status report on the development of a strategy for enrolling student teachers for teacher educations based on national teacher demand	Strategy developed and implemented
		Colleges of education enrolling students based on national demand
Conduct capacity building activities for college managers on education leadership and management	Number of college managers trained	All college managers trained
Conduct capacity-building activities for resource centres coordinators on education leadership and management	Number of resource centres coordinators trained	14 Provincial ,109 District, 847 Resource and resource centre coordinators trained
Train school and college managers on the importance of practising evidence-based performance	Status report on the programme	40,000 participants (all heads, deputies, heads of departments and senior teachers for the 9,500 schools)
	No. of resource centre coordinators and college managers trained	14 provincial, 109 district and 847 zonal resource centre coordinators trained
Develop library service policy framework	Policy gamework developed	Status report on the development of policy framework
Devise mechanisms for determining national teacher needs	Availability of system for determining subject specific teacher national needs	Status report on the system development and implementation for determining subject specific teacher national needs
	Improve equitable recruitment and deployment of teachers especially those for STEM	Mechanism for recruiting and deploying STEM teachers

Management Support Services

The ESSP will prioritize the following key strategic areas for management and support services:

- Strengthen oversight of teaching and learning across education ministries sub-sectors;
- Strengthening the policy, regulatory and legal environment;
- Devolving and decentralizing education delivery services to lower points of delivery;
- Enhancing all management systems; and
- Removing barriers in education.

Key interventions	Progress Indicator (outputs)	Targets (2021)
Access		
Develop out-of-school children strategy to address their needs	No. of out-of-school children strategy developed	One out-of-school children strategy developed and implemented
Devise strategy to enhance operations of open community schools	Strategy developed	Status report on strategy implementation
Enhance evidence-based approach to development of school infrastructure	Allocation of school infrastructure based on empirical data	Status report on evidence-based allocation of infrastructure
Quality		
Development of teacher Professional standards	Teacher professional standards developed	Implementation of teacher professional standards
Enhance head teacher supervision and leadership skills to improve learning outcomes	Number of head teachers trained on ZEMT	100% head teachers trained in the ZEMT
		100% of trained head teachers implementing ZEMT
		Improve the learning outcomes by 25%
Design the capacity enhancement programme to bridge performance gaps	Capacity enhancement programme developed	Status report on implementation of the capacity enhancement programme
Establish a memorandum of understanding between general education schools and TEVET institutions on vocational programmes, teachers and facilities	Memorandum of understanding developed	Status report on implementation of memorandum of understanding
Equity		
Strengthen home grown school feeding programme	Number of provinces and Districts implementing Home grown feeding programme	109 districts in 10 provinces
Update the assessment of CSEN needs in ECE	CSEN Assessment Tools developed	Status on implementation of CSEN assessment tools

Key interventions	Progress Indicator (outputs)	Targets (2021)
Development of minimum standards for WASH in schools	Minimum standards for WASH developed	Status report on the development and implementation of minimum standards for WASH in schools
		50% of schools from the current 30%, adhere to WASH minimum standards
Improve the management of the scholarships and bursary schemes for vulnerable learners	Strategy for planning and management of bursary schemes developed	Planning and management of bursary schemes in place and functional
	Number of learners receiving scholarship and bursaries	120,000 learners on scholarships and/or bursaries

Efficiency

Improve guidelines on resource allocation	Clear guidelines on resource allocation developed & implemented	Clear guidelines on resource allocation disseminated to 10 provinces and 109 districts
Construction of office accommodation for newly created districts	Number of offices constructed	33 district offices constructed and one provincial office
Develop strategy to procure, distribute and utilize TLM	TLM procurement strategy for ECE, PE and SE developed	Status report on implementation of procurement strategy
Strengthen the link between planning and budgeting, particularly by enhancing output-based budgeting	Status report on harmonization between planning and budgeting	Ministry plans clearly linked to output-based budgeting
Strengthen mechanisms for permanent monitoring of sector performance	Structure for M&E developed	Status report on development of permanent monitoring of sector performance
	M & E structure developed	Institutionalized schedules for permanent monitoring of sector performance developed
Strengthen and automate the management information system	HR, Bursary, EIMIS, IFMIS and Procurement and supply systems automated (national, province, district and institutional levels)	Status report on automation of management information systems
Ensure a harmonized expansion of education sub-sectors, through a balanced intra-sectoral allocation	Mechanism for harmonized expansion of education sub-sectors developed	Status report on implementation of harmonized expansion of education sub sectors
Formulate a comprehensive capacity development strategy for education planning and management	Capacity development strategy developed	Status report on implementation of capacity development strategy for planning and management
Review organizational structure so as to have well-defined functions, staffing levels and grading	Organizational structure reviewed	Responsive and well-defined organizational structure
		Structural inefficiencies in resource management addressed
Strengthen and decentralize staff recruitment and placement system	Decentralized efficient staff recruitment and placement system in place and being utilized	Strategy to reduce imbalances in the allocation of teachers by gender, subject, and rural/urban in place and implemented

Key interventions	Progress Indicator (outputs)	Targets (2021)
A strengthened rewards and sanctions system	Strengthened rewards and sanctions system based on performance developed	Status report on strengthened rewards and sanctions system
Delink standards function from administration	A semi-autonomous standards unit delink standards from main stream education administration	Status report on delinking standards from administration
Enhance institutional and teacher monitoring and inspection	Mechanism for monitoring and inspection of teachers and institution developed	Status report on the development of Mechanisms for monitoring and inspection of teachers and institution
Strengthen legal, regulatory and policy environment	Status report on review of the Education Policy of 1996 (<i>Educating our Future</i>)	Strengthen legal, regulatory and policy environment
	Status report on the review of the Education Act No. 23 of 2011	Education Act of 2011 implemented
	Status report on the formulation of the sector strategic plan	Sector strategic plan implemented
Development of Framework for teacher management	Status report on the development of the framework for teacher management	Framework for teacher management developed and implemented, i.e., include teacher training, motivation, retention, CPD, and deployment, etc.
Develop system for teacher education to train teachers based on demand	System for determining subject specific teacher national needs developed	Status report on implementation of system for determining subject specific teacher national needs
Establish framework for supervision and support at points of education delivery	Framework for supervision and support developed	Status report on implementation of system for determining subject specific teacher national needs
Establish framework for public financial management capabilities, effective procurement and HR systems and robust institutional leadership development plans	Framework for public financial management capabilities developed	Status report on implementation of frameworks for public financial management, effective procurement and HR systems and robust institutional leadership
Establish framework for public financial management capabilities, effective procurement and HR systems and robust institutional leadership development plans	Framework for public financial management capabilities developed	Status report on implementation of frameworks for public financial management, effective procurement and HR systems and robust institutional leadership
	Status report on restructuring	Ministry restructured, and aligned to meet its mandate
	Status report on devolution of and de concentration of some functions	Identified functions devolved and /or de concentrated to local authorities or lower levels
	Status report on automation of processes data management systems, and information usage system (EMIS)	Data collection, processing, and storage automated and accessible to all relevant Ministry functions
	Number of audit queries	Reduce by at least 50% annually
	Procurement audit reports	Reduce by at least 50% annually the number of procurement irregularities Timely transparent efficient and effective evaluation and delivery of procured goods and services
Develop a mechanism to ensure appropriate-age enrolment in PE	Strategy for managing enrolment at entry (Grade 1) developed	Enrolment strategy in place and being implemented
		Strategy for fast-tracking of over-aged children developed
		All the children age 7 enrolled in school All average learners enrolled in the Catch-Up Programme

Key interventions	Progress Indicator (outputs)	Targets (2021)
Enhance education leadership and management through developing a tool and capacity-building	Education leadership and management tool developed	Status report on implementation of education leadership and management tool
	Number of education management team at different levels trained in ZEMT	100 % of managers at different levels trained in education management tools
Improve the recruitment and deployment of STEM teachers	Mechanism for recruiting and deploying STEM teachers developed	Status report on recruitment and deployment of teachers especially those for STEM
Develop clear costed strategy for financing universal ECE	Strategy for financing universal ECE developed	Status report on implementation of ECE financing strategy
Develop quality data collection systems on ECE	Integrate ECE data collection into MoGE EMIS	All (7,348) ECE centres providing information for EMIS
Develop guidelines on the establishment of community and private ECE centres	Guidelines on establishment of community and private ECE centres developed	Status report on implementation of guidelines for establishment of community and private ECE centres
Devise mechanisms for multisectoral collaboration to support education sector	Mechanism for multisectoral collaboration developed	Status report on implementation of multisectoral collaboration

University education

- Strengthen the regulatory functionalities of the HEA and ZAQA as a way of maintaining and improving quality and credibility;
- Increase the number of graduates on courses demanded by industry; and
- Create an enabling environment for innovative ways of funding universities.

Key interventions	Progress Indicator (outputs)	Targets (2021)
<u>Access</u>		
Develop and improve infrastructure for higher education	Number of learners enrolled in PUs	75,000
Promote use of alternative modes for delivery of higher education	Number of learners enrolled in programmes offered through alternative modes of training	25,000
Enhance private sector participation in the provision of higher education	Number of private universities fully registered	100
<u>Quality & relevance</u>		
Enhance the capacity of universities	Number of higher learning institutions equipped	10
	Number of lecturers with qualifications upgraded	100
Ensure relevance of curricula	Number of existing curriculum reviewed	75
	Number of new curriculum developed	75
Promote innovation, research and development in higher education	Number of research products in higher education institutions	25
Promote the learning of STEM in HEIs	Proportion of students enrolled in STEM programmes	30%

Key interventions	Progress Indicator (outputs)	Targets (2021)
<u>Equity</u>		
Enhance the student loans scheme	Number of OVC receiving loans	189,598
Promote access for learners with special education needs	Proportion of the disabled eligible learners enrolled in higher learning institutions	85%
Enhance gender balance in higher learning institutions	Proportion of female students enrolled in higher learning institutions	50%
<u>Efficiency</u>		
Strengthen the policy and regulatory framework for higher education	Revised regulatory and legal framework in place	1 Policy 1 Act
Create an enabling environment for innovative ways of funding universities	Sustainable financing mechanism for public universities in place	Sustainable financing mechanism for Pus in place
Implement mechanisms for effective monitoring and evaluation in higher education	MIS in place	1 MIS

TEVET

- Strengthen the regulatory functionalities of TEVETA as a way of maintaining and improving quality and credibility;
- Improve MIS on skills development; and
- Enhance industry responsive curriculum development and review based on tracer studies and discussion with industry.

Key interventions	Progress Indicator (outputs)	Targets (2021)
Access		
Develop and improve infrastructure for TEVET	Number of learners enrolled in public TEVET institutions	60,000
Promote use of alternative modes for delivery of TEVET	Number of learners enrolled in programmes offered through alternative modes of training	25,000
Enhance private sector participation in the provision of skills training	Apprenticeship/work-based learning framework	Apprenticeship/work-based learning framework in place
Quality		
Enhance capacity of training institutions	Number of training workshops equipped	25
	Number of lecturers with qualifications upgraded	100
Ensure relevance of curricula	Number of existing curriculum reviewed	150
	Number of new curriculum developed	150
Enhance the qualifications of lecturing staff	Number of lecturers undergoing qualifications upgrade	100
Promote innovation, research and development in TEVET	Number of research projects in TEVET	25
Equity		
Enhance the TEVET bursary scheme	Number of OVC receiving TEVET bursaries	3,000
Promote access for learners with special education needs	Proportion of the disabled eligible learners enrolled in TEVET	70%
Enhance gender balance	Proportion of female students enrolled in TEVET	50%
Efficiency		
Strengthen the policy and regulatory framework for higher education	Revised regulatory and legal framework in place	Reviewed TEVET Policy and Act in place
Operationalize the Skills Development Fund	Number of training institutions accessing support from the skills development fund	300
Implement mechanisms for effective monitoring and evaluation in TEVET	TEVET MIS in place	TEVET MIS launched
Enhance vocational pathway to optimize linkage between Secondary education and TEVET	Number of secondary education pupils enrolled in TEVET	15,000

Annex 6. MONITORING INDICATORS

	Indicator	Baseline 2016	2019	2020	Target 2021	Means of verification		
						Information Source	Frequency	Responsible
1. Early Childhood Education								
1.1 Improved access to ECE								
1	Participation rate (NER) in organized learning (one year before the official primary entry age), by sex	14%	40%	45%	50%	EMIS	Annually	ECE Planning
2	Gross early childhood education enrolment ratio in (a) pre-primary education and (b) and early childhood educational development	No data	-	-	50%	EMIS	Annually	
3	Percentage of Grade 1 entrants with ECE experience	30%	40%	45%	50%	EMIS	Annually	
1.2 Improved quality of ECE								
4	Proportion of children under 7 years of age who are developmentally on track in a) health and nutrition b) learning and c) psychosocial well-being, by sex	No data	-	-	100%	EMIS	Annually	ECE Planning
5	Percentage of qualified teachers in pre-primary education	2.30%	3.10%	3.30%	3.60%	ECE/EMIS	Annually	ECE Planning/ HRA
6	Proportion of ECE centres stocked with teaching and learning materials and kits for indoor and outdoor playing materials	NO Data	33%	66%	100%	EMIS	Annually	ECE Planning Standards & Curriculum
7	Proportion of ECE centres meeting minimum standards	NO Data	10%	20%	30%	EMIS	Annually	
8	Proportion of ECE centres adhering to standard Pupil/teacher contact time (5 hours/day)	50%	75%	85%	100%	ECE/EMIS	Annually	ECE/DPI

	Indicator	Baseline 2016	2019	2020	Target 2021	Means of verification		
						Information Source	Frequency	Responsible
1.3 Enhanced equity in ECE provision								
9	Location parity of Grade 1 entrants with ECE experience	No data	-	-	20%	EMIS	Annually	ECE/Planning
10	Number of teachers in pre-primary with capacity for a) child assessment and b) early screening for CSEN	No data	No data	No data	2000	TESS	Annually	TESS
1.4. Enhanced efficiency in ECE delivery								
11	ECE data integrated into EMIS	Very Little Information on ECE	Integration of ECE data	Integration of ECE data	Data fully integrated, collected, analysed and disseminated	EMIS	Annually	ECE Planning
12	ECE Policy fully operationalized (to develop milestone indicators)	Policy developed with costed PIP	Policy Operationalized	Policy Operationalized	Policy approved and guiding programming	Approved Policy and Implementation Plan	Annually	
13	Free pre-primary education guaranteed in legal frameworks	None	None	None	The clause should be included in the Education Act	Revised Education Act	Annually	
2. Primary Education								
2.1 Improved access to Primary Education								
14	Primary completion rates	92.5%	99%		100.00%	EMIS	Annually	Planning Standards
15	Percentage of learners over-age for grade in primary education	56.70%	85%	95%	100%	EMIS	Annually	
16	NER (Grade 1-7)	90	96	98	100	EMIS	Annually	
2.2 Improved quality of primary education								

Indicator	Baseline 2016	2019	2020	Target 2021	Means of verification		
					Information Source	Frequency	Responsible
Learner proficiency levels (a) in Grade 2 and 5; (b) at the end of primary education (assessment system to be developed) achieving at least a minimum proficiency level in (i) reading and (ii) mathematics	Grade 2 reading = 34.9 Mathematics =36.98 Grade 5 reading =42 and mathematics=65	Grade 2 reading = 40 Mathematics =43 Grade 5 reading =48 and mathematics=65	Grade 2 reading = 42 Mathematics =45 Grade 5 reading =50 and mathematics=80	Grade 2 reading = 44 Mathematics =47 Grade 5 reading =52 and mathematics= 85	EGRA/EGMA, NAS	3yrs	Planning Standards
Interventions towards learners meeting the defined minimum standards by grade by learning area	None	Implement the minimum standards	Monitor implementation of minimum standards	Setting Acceptable standards by grade and learning area	EMIS	Annually	
Administration of a nationally representative learning assessment in a) Grade 2 and 5 b) Grade 7	EGRA/EGMA (Grade 2), NAS (Grade 5) and learning achievement (Grade 7- to be devised)	EGRA/EGMA (Grade 2), Results dissemination NAS (Grade 5) results disseminated learning achievement (Grade 7- implemented)	EGRA/EGMA (Grade 2), Implement interventions NAS (Grade 5) Interventions Learning achievement (Grade 7-results analysis and dissemination)	EGRA/EGMA (Grade 2) conducted NAS (Grade 5) conducted learning achievement (Grade 7-interventions)	EGRA/EGMA NAS Grade 7 Learning achievements	3YRS 5Yrs 5yrs	
Proportion of early grade teachers equipped with appropriate skills to teach literacy and numeracy	25%	80%	90%	100%	ECE/EMIS	Annually	
Proportion of primary school teachers upgraded from certificate to Diploma/ Degree	50%	80%	90%	100%	EMIS/TESS	Annually	
Percentage of qualified teachers in community schools	2%	12%	17%	20% of qualified teachers in community schools	EMIS	Annually	
Proportion of teachers in primary with the capacity to undertake formative assessment	Weak capacity to undertake formative assessment (40%)	80%	90%	100% of teachers in primary with the capacity to undertake formative assessment	Projections	Annually	
Pupil:teacher ratio	42.3	40.9	40.6	40:1 (grade 1-4), 35:1 (grade 5-7)	EMIS	Annually	
Pupil/teacher contact time	4.5	4.8	4.9	5	EMIS	Annually	
Pupil: book ratio	0.96	0.95	0.99	1	EMIS	Annually	

2.3 Enhanced equity in Primary Education

	Indicator	Baseline 2016	2019	2020	Target 2021	Means of verification		
						Information Source	Frequency	Responsible
27	Percentage of 7-year-old out-of-school in primary education	47.30%	42.90%	41.50%	10.00%	EMIS	Annually	Planning Standards
28	Proportion of teachers in primary with capacity for child assessment and early screening for CSEN	2%	10%	15%	20%	EMIS	Annually	
29	Percentage of schools with qualified and adequately staffed guidance and counselling teachers	5%	30%	40%	50%	EMIS	Annually	
2.4. Enhanced efficiency in Primary Education								
30	Grade 7 Repetition	6.20%	5.50%	5.20%	5.00%	EMIS	Annually	Planning Standards
31	Completion rate in primary education	98%	99%		100.00%	EIMS	Annually	
3. Secondary Education								
3.1 Improved access to Secondary Education								
	Completion rate	Grade 9= 69.2 % Grade 12=36 %	Grade 9= 82.4 % Grade 12=42.5 %	Grade 9= 86.4 % Grade 12=44.5 %	Grade 9= 90.4 % Grade 12=50 %	EMIS	Annually	Planning Standards
	Transition Rate 7 to 8	91.70%	96.70%	98.30%	100	EMIS	Annually	
	Transition Rate 9 to 10	44.3	50.7	52.9	55	EMIS	Annually	
	NER (Grade 8–9)	47	59	63	67	EMIS	Annually	
	NER (Grade 10–12)	38	53	57	60	EMIS	Annually	
3.2 Improved quality of Secondary Education								
	Administration of a nationally representative learning assessment at the end of junior secondary education	NAS grade 9	NAS grade 9 results dissemination	NAS grade 9 interventions	NAS grade 9 conducted	NAS	5Yrs	Planning Standards
	Proportion of learners at the end of junior secondary education achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex	NAS Grade 9 English 39.8% Mathematics 31.6%	NAS Grade 9 results dissemination Grade 9 English 45% Maths 40%	NAS grade 9 interventions	NAS Grade 9 Conducting	NAS	5yrs	
	Percentage of secondary school teachers equipped with appropriate skills to teach STEM subjects	Teachers in Science= 50%, Maths= 45%, Technology= 8%	Teachers in Science= 56%, Maths= 51%, Technology= 8%	Teachers in Science= 58%, Maths= 45%, Technology= 8%	Teachers in Science= 60%, Maths= 53%, Technology= 8%	EMIS/TESS	Annually	Planning/ TESS
	Proportion of secondary school teachers equipped with appropriate qualifications to deliver the vocational pathways	5062 schools teaching vocational subjects with 80% teachers qualified	85%	90%	95% of teachers (those teaching vocational) qualified to teach	EMIS/TESS	Annually	TESS/Standards
	Pupil:teacher Ratio (Grade 8–9)	46.6	40.6	39.3	38	EMIS	Annually	Planning/ Standards

	Indicator	Baseline 2016	2019	2020	Target 2021	Means of verification		
						Information Source	Frequency	Responsible
	Pupil:teacher Ratio (Grade 10–12)	35	35	35	35	EMIS	Annually	Planning/ Standards
	Pupil/teacher contact time	6.5	6.7	6.8	7	EMIS	Annually	Planning/ Standards
3.3 Enhanced equity in Secondary Education								
	Out-of-school rate for secondary education (out-of-school children (OOSC) access to secondary education opportunities increased)	27	46.6	63.5	80	DHS	3yrs	Planning/ CSO
	Proportion of qualified teachers in secondary education	Gr. 8-9= 100% Gr. 10-12= 45%	Gr. 8-9= 100% Gr. 10-12= 55%	Gr. 8-9= 100% Gr. 10-12= 65%	Gr. 8-9= 100% Gr. 10-12= 75%	EMIS	Annually	Planning Standards
	Percentage of vulnerable children accessing scholarships and bursary schemes	3.50%	4.60%	4.80%	5%	EMIS	Annually	
	Gender parity index (Grade 8–9)	0.926	0.98	1	1	EMIS	Annually	
	Gender parity index (Grade 10–12)	0.84	0.9	0.92	1	EMIS	Annually	
	Transition rate 9 to 10	44.3	50.7	52.9	55	EMIS	Annually	Planning/ Standards
	Dropout rate	1.00%	0.80%	0.80%	0.70%	EMIS	Annually	DPI
	Completion rate in junior secondary education and upper secondary education	Grade 9= 69.2 % Grade 12=36 %	Grade 9= 82.4 % Grade 12=42.5 %	Grade 9= 86.4 % Grade 12=44.5 %	Grade 9= 90.4 % Grade 12=50 %	EMIS	Annually	Planning/ Standards
4. AMEP								
4.1 Improved access to AMEP								
	Participation rate of youth and adults in AMEP programmes and training in the previous 12 months.	24%	35%	40%	50%	DODE	Annually	DODE
	Percentage of children with access to AMEP	18.30%	25%	30%	40%	DODE	Annually	DODE
4.2 Improved quality of AMEP								
	Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill	No data	20%	30%	40%	ICT Survey	2yrs	DODE/DPI

Indicator	Baseline 2016	2019	2020	Target 2021	Means of verification		
					Information Source	Frequency	Responsible
Percentage of youth/adults who have achieved at least a minimum level of proficiency in digital literacy skills	No data	10%	20%	30%	ICT Survey	2yrs	DODE/DPI
Proportion of AMEP instructors equipped with appropriate skills to teach vocational education	40%	75%	90%	100%	DODE/DPI	Annually	DODE/DPI
Proportion of AMEP instructors with capacity to undertake continuous assessment	None	70%	80%	100%	DODE	Annually	DODE
Learner:instructor ratio	25	35	40	45	DODE/EMIS	Annually	DODE/DPI
Learner/instructor contact time	5hrs	6hrs	7hrs	8hrs	DODE/EMIS	Annually	DODE
4.3 Enhanced equity in AMEP							
Parity indices (female/male, rural/urban) on provision of AMEP	0.79	0.85	0.9	1	DODE/EMIS	Annually	DODE/DPI
Proportion of AMEP instructors with capacity for child assessment and early screening for CSEN	N/A	65%	70%	80%	DODE/TESS	Annually	DODE/TESS
Proportion of qualified instructors in AMEP	N/A	65%	70%	80%	DODE/EMIS	Annually	DODE/DPI
5. Teacher education and specialized services							
5.1 Improved quality of Teachers							
Proportion of teachers in: (a) pre-primary education; (b) primary education; and (c) secondary education; who have received at least the minimum required teacher training	(a)Pre-Primary= 60% (b) Primary= 94% (c) Sec= 86%			(a)Pre-Primary= 80% (b) Primary= 100% (c) Sec= 95%	EMIS	Annually	DPI

	Indicator	Baseline 2016	2019	2020	Target 2021	Means of verification		
						Information Source	Frequency	Responsible
	Proportion of secondary school teachers equipped with appropriate skills to teach STEM subjects	2 741	3,000	3,000	16,000	TESS/EMIS	Annually	DPI/TESS
	Proportion of secondary school teachers equipped with appropriate skills to deliver the vocational subjects	400	1000	1000	3,000	TESS/EMIS	Annually	TESS/DPI/S&C
	Proportion of pre-primary lecturers equipped with appropriate skills to teach literacy and numeracy skills	0	20	20	100	Various policy documents	Annually	TESS/DPI/NSC
	Proportion of primary lecturers equipped with appropriate skills to teach literacy and numeracy skills	0	30	30	150	Various policy documents	Annually	TESS/DPI/NSC
	Percentage of resource centres that are equipped to meet national in-service training and CPD demands	0	5	5	24	Various policy documents	Annually	TESS/DPI/NSC
	Proportion of schools (pre-primary, primary and secondary) conducting CPD programmes according to the national demands	0	3,000	3,000	9,700	JICA Data on implementation of Lesson Study	Annually	TESS/NSC
	Proportion of colleges of education conducting CPD programmes according to the national demands	ECE CDP for college lecturers in 9 colleges being done	30	30	120	JICA Data on implementation of Lesson Study and Teaching Council of Zambia	Annually	TESS/NSC
5.2 Improved access to teacher education								
	Number of colleges of education with minimum facilities and equipment to meet national needs	Obsolete Equipment	3	2	12	Various Policy docs	Annually	TESS/Standards/DPI

Indicator	Baseline 2016	2019	2020	Target 2021	Means of verification			
					Information Source	Frequency	Responsible	
5.3 Enhanced equity in teacher education								
Number of serving teachers capacity-built in guidance and counselling	2,600	200	200	1,000	Monitoring reports	Annually	TESS Standards	
Number of serving lecturers capacity-built in guidance and counselling	None	30	30	150	Monitoring reports	Annually		
Number of CSEN schools equipped to meet national demands	None	10 SE schools, 50 SE Units, 1 SE Unit in CoE, 600 teachers, 4 Lecturers	15 SE schools, 50 SE Units, 1 Special Education Unit in CoE, 200 Teachers, 2 Lecturers	50 SE schools, 220 SE Units, 7 SE units in CoE, 1,795 teachers, 14 Lecturers	Ministry documents	Annually	TESS DPI Standards NSC	
6. Management and support services								
6.1 Effective governance, planning & management at all levels								
Percentage of new districts with offices	42 new districts with no offices	60%	80%	100%	DPI	Annually	Planning	
Proportion of supervisors who have undergone enhanced Education leadership development programme (school, district, province, national)	1,200 trained from total of 9,674 School Managers (Primary =8,823, Secondary =851) representing 12%	40%	50%	60%	TESS/EMIS	Annually	TESS/STANDARDS	
Pupil:teacher ratio by location and subject	Grade (8-9)=37, Grade (10-12)=35	Grade (8-9)=36, Grade (10-12)=35	Grade(8-9)=36, Grade 12=35	Grade(8-9)=35, Grade (10-12)=35	EIMS	Annually	Planning Standards HRA	
Pupil:book ratio by subject and grade	0.72	0.85	0.9	1	EIMS	Annually		
Timeliness, accuracy and comprehensiveness (this year's data this year)	EMIS is in place though some processes are not automated	Comprehensiveness		Timeliness, accuracy and comprehensiveness (this year's data this year)	EIMS	Annually	Planning	
Number of undertakings for joint sector evaluation, monitoring and review	1 through JAR	1	1	1	EIMS	Annually	DPI/All	
Policy and regulatory environment updated to national needs	Education policy of 1996, Education Act of 2011	Education policy of 1996, Education Act of 2011 validated		Education policy of 1996, Education Act of 2011 Operationalized	Reports	Quarter/ Annual Reports	DPI/All	

Indicator	Baseline 2016	2019	2020	Target 2021	Means of verification			
					Information Source	Frequency	Responsible	
6.2 Remove barriers to access quality education								
NER (ECE)	14%	40%	45%	50%	EMIS	Annually	ECE/DPI/All	
NER (1–7)	94%	97%	98%	99%	EMIS	Annually	DPI Standards	
NER (8–9)	47%	59%	63%	67%	EMIS	Annually		
NER (10–12)	38	53%	57%	60%	EMIS	Annually	DPI	
6.3 Effective management of pedagogical functions								
Proportion of secondary schools accessing specialized rooms in TEVET institutions	None. Collaboration started when it was one ministry, now we are separate ministries	30%	40%	50%	Standards/TEVET	Annually	TESS/DPI Standards TEVET HRA	
Pupil:book ratio by subject and grade	0.72	0.85	0.9	1	EMIS	Annually	DPI/Standards	
Proportion of budgetary resources devoted to children with special education needs	3.20%	4.30%	4.60%	5.00%	AWPB	Annually	TESS/DPI	
Education Policy and Education Act revised (to develop milestone indicators)	Both are in draft form			both approved and operational	Reports	Annually	DPI	

Annex 7. ASSUMPTIONS UNDERPINNING THE FINANCIAL MODEL

Assumptions for learner projections (enrolments)

Learner projections	2015		2022	
	Baseline*	Low	Medium	High
Population growth	2.9%	2.9%	3.0%	3.1%
ECE				
5-6 year old in ECE	12.1%	18.0%	25.0%	25.0%
% of G1 with ECE experience	24.4%			
Enrolment in GRZ ECE	54%	55%	57%	60%
Enrolment in private ECE	46%	45%	43%	40%
Current number of GRZ ECE classrooms	1526			
Pupil Teacher ratio (average) 1:	50	48	40	25
Pupil Classroom ratio 1:	43	43	40	35
Primary				
% of 7 years old not in Grade 1	49%	45%	40%	35%
Enrolment in GRZ/GA	78%	79%	80%	82.5%
Enrolment in private	4%	5%	6%	8%
Enrolment in community	18%	17%	15%	10%
Current number of primary classrooms	45146			
Pupil Teacher ratio 1:	42.7	41	40	40
Pupil Classroom ratio (double shift) 1:	55	55	55	55
Repetition rate	6.4%	6.0%	5.0%	3.0%
Drop out rate	1.6%	1.5%	1.3%	0.9%
Teacher attrition rate	2.0%	2.0%	1.8%	1.5%
Secondary				
Number of secondary classrooms	9115			
Repetition rate	1.3%	1.2%	0.9%	0.7%
Drop out rate	1.1%	1.0%	0.7%	0.5%
Pupil Classroom ratio (double shift) 1:	78	78	78	78
Grade 8-9				
Transition rate Grade 7 to 8	64.5%	65.0%	70.0%	100.0%
Enrolment in GRZ/GA	89.6%	89.3%	88.0%	87.0%
Enrolment in private /church/community	10.4%	10.7%	12.0%	13.0%
% Pupils in academic pathway	80.0%	78%	75.0%	70.0%
% Pupils in vocational pathway	20%	23%	25%	30%
Pupil Teacher ratio (Grade 8-9) 1:	45.9	43	42	40
Grade 10-12				
Transition rate Grade 9 to 10	42.2%	50.0%	55.0%	60.0%
Enrolment in GRZ/GA	88.0%	87.0%	86.0%	85.0%
% Pupils in academic pathway	80.0%	77.5%	75.0%	70.0%
% Pupils in vocational pathway	20.0%	22.5%	25.0%	30.0%
Pupil Teacher ratio (Grade 10-12) 1:	35.2	35	35	35

*) Source: Statistical bulletin 2015.

Baseline figures presented in red were not available and are best estimates

Results of medium case scenario

SUMMARY	2018	2019	2020	2021	2022	
	Scenario running					
Assumptions learner projections	Medium					
Assumptions cost projections	Medium					
Assumptions revenue projections	Medium					
Assumptions investment projections	Medium					
Total enrolment in GRZ/GA schools	2018	2019	2020	2021	2022	Average
ECE	112,421	130,326	149,465	169,911	183,925	149,210
Primary	2,814,595	2,911,076	2,999,667	3,108,538	3,207,466	3,008,268
Secondary	787,927	851,815	902,420	962,962	1,033,678	907,760
Total budget MOGE in million ZMW	2018	2019	2020	2021	2022	Average
Budget forecast	9,337	9,852	10,403	10,991	11,580	10,433
Total expenditure MOGE in million ZMW	2018	2019	2020	2021	2022	
1. Personal emoluments	7,420	7,842	8,314	8,867	9,361	8,361
2. Non-PE	483	556	632	716	808	639
3. Capital expenditures	790	783	705	844	810	786
4. Management and support services	586	609	634	659	683	634
Total costs in million ZMW	9,279	9,790	10,285	11,087	11,662	10,421
Balance						
Unallocated / financing gap	59	62	118	-96	-82	12
1. Personal Emoluments (high)	2018	2019	2020	2021	2022	Average
ECE	106	126	147	170	191	148
Primary education	5,541	5,842	6,137	6,484	6,758	6,153
Secondary education	1,773	1,874	2,030	2,213	2,412	2,060
Total costs in million ZMW	7,420	7,842	8,314	8,867	9,361	8,361
2. Non-PE	2018	2019	2020	2021	2022	Average
School grants	209.3	237.3	265.3	296.9	335.9	269
Teaching and Learning materials	145.6	161.3	176.9	194.6	213.6	178
Bursaries	33.7	39.6	45.8	52.9	63.7	47
School feeding	46.2	51.3	56.4	62.2	67.4	57
ODL , Y&AL and CSEN (incl PE)	48.1	66.7	87.2	109.9	127.4	88
Total costs in million ZMW	482.9	556.1	631.6	716.5	807.9	639
3. Capital expenditure	2018	2019	2020	2021	2022	Average
ECE classrooms	42.6	46.4	50.5	54.9	46.4	48
Primary education classrooms	260.3	222.6	205.2	251.3	223.0	232
Secondary education classrooms	487.4	513.8	449.6	538.1	540.4	506
Teacher houses	247.6	346.3	345.5	404.7	335.2	336
Total costs in million ZMW	790.3	782.7	705.2	844.3	809.8	786
4. Management and Support services	2018	2019	2020	2021	2022	Average
MOGE (incl. PE)	585.5	608.9	633.6	659.5	683.2	634
Total costs in million ZMW	585.5	608.9	633.6	659.5	683.2	634

Annex 8. POTENTIAL RISKS AND POSSIBLE MITIGATION STRATEGIES

Risk	Possible Mitigation Strategies	Risk Level	Responsibility
A lack of, or inadequate, political commitment to implement the entire plan can result in partial, suboptimal execution.	<ul style="list-style-type: none"> Develop a communication strategy for the political stakeholders that helps them understand of the complexity and intricacy of the ESSP Develop a profile of undesirable commitment scenarios and the negative impact these scenarios will have on the outcomes of the plan as a way of enhancing political support. 	Medium	PS
Legislation that is currently out of alignment, with the sector priorities resulting in an inadequate legal framework for the desired outcomes of the plan.	Facilitate the updating of the legal framework in order to ensure alignment with the current policy thrust.	Medium	DPI and all Directors and Heads of units
Flouting or compromising of the legal framework for managing contracts makes the sector vulnerable to discretionary decision making and corruption.	Ensure strict adherence and complying to procurement laws, guidelines and tender procedures	High	Head Procurement
Misaligned policy priorities: e.g., decision makers prioritize hard investments (i.e., large construction projects) over soft investments (i.e., the daily costs of running schools) due to opportunities for political gain.	<ul style="list-style-type: none"> Revise the Education Policy of 1996 so it is in tandem with aspirations of the Government and 7NDP Evidence-based school infrastructure plans 	Medium	PS
Unstable macro-economic environment leading to inadequate funding of the sector during the Plan period.	Develop a system for sensing & forecasting economic conditions & develop funding strategies for various economic scenarios. It is imperative that both the MoGE & schools seek to diversify their funding sources.	High	MoF, MoNDP and CPs
Failure to align the structure of the MoGE with the needs of the plan, resulting in a lack of appropriate accountability for the identified priorities.	<ul style="list-style-type: none"> Ensure that every strategic priority has officers/units who will be held responsible for implementing related initiatives. Review the structure of the MoGE and, where necessary, make recommendations for realignment and capacity building that will lead to greater efficiency and accountability. Consolidate job functions as well as considering consolidation of internal units to bring about improved quality of service. 	Medium	DPI
Ineffective critical stakeholder engagement and buy-in leading to failure to communicate the plan will result in disengagement which can negatively impact areas where partnerships with stakeholders are crucial to success.	Develop a stakeholder engagement strategy that focuses on communication for information purposes as well as on their involvement as partners in execution. Stakeholder partnership networks can be established at all levels of the education system: at the level of the MoGE, at the level of the community and individual schools/ ECE centres.	High	PS and DPI

Risk	Possible Mitigation Strategies	Risk Level	Responsibility
Inadequate ICT investment in learning management systems; education management information systems (EMIS); school technology infrastructure; the integration of schools with the MoGE and the inability to create synergy from information sharing.	<ul style="list-style-type: none"> Establish an ICT policy for the entire education system. Create an ICT service unit within the MoGE to harmonize the ICT platform with all the education service delivery points. The ICT platform must be aligned to support the priorities of the ESSP. As part of the ICT strategy, identify a common learning management system for all schools to enable efficiency, synergy, and collaboration among institutions. An Open Educational Resource (OER) Policy is also necessary to facilitate access to and creation of online educational resources. 	Medium	DPI, Director DODE and Director Standards
Non-existent or ineffective M&E of the ESSP.	Put in place a robust M&E framework for the education sector.	High	DPI
Failure to develop: a formal execution strategy within the MoGE; a strategy that establishes an appropriate execution process; organizational structure; an execution culture; and a system of incentives to drive execution.	Ensure the development of a formal execution strategy that is fully and extensively communicated to all critical partners in the execution process. There is a need for transparency with respect to implementation so that there is a shared understanding of the rollout of the ESSP.	High	DPI
Occurrence of natural or man-made disasters such as blown off roofs, fires, disease outbreaks, flooding vandalism, etc., causing the diversion of funding away from education.	Develop a risk mitigation strategy for disasters. Develop a policy on disaster management which addresses each type of likely disaster and the manner in which schools, the MoGE and the community will be engaged in addressing the disaster situation.	Medium	DMMU
Criteria breached; bribes or favouritism in private school establishment, accreditation; and allocation of subsidies compromise access, quality, and equity of education. Lack of well-defined procedures and regulations provides opportunities for unethical conduct.	<ul style="list-style-type: none"> Formulate strict but transparent and effective mechanisms to award or allocate subsidies, and the establishment and accreditation of institutions Establishment of integrity committees at all points of service delivery 	High	TCZ, Standards and Higher Educational Authority, National Qualification Authority
Lack of capacity for enforcing an accreditation system impairs the quality of education. Lack of, or inadequate enforcement of the professional code of conduct for school personnel (e.g., administrative staff and teachers), provides opportunities for engaging in unethical practices.	<ul style="list-style-type: none"> Build capacity at all institutions to function effectively and efficiently The professional code of conduct should be applied uniformly and should have clearly outlined sanctions 	Medium	PS

Risk	Possible Mitigation Strategies	Risk Level	Responsibility
<ul style="list-style-type: none"> Overlooking school violations during inspector visits in return for bribes or favours subverts education standards. Bribes for lax implementation of examination procedures, assessment criteria, and certification of examination results weaken the quality of education. 	<ul style="list-style-type: none"> Ensure inspections are conducted by at least three officers every time such is required Put stringent measures in place to address examination malpractices and ensure all procedures, assessment criteria and certification rules are followed. 	High	PS and Director Standards
Directing the location of school construction and services to locations that offer opportunities for personal gain contributes to corruption risks.	School infrastructure development plans should be evidence-based and transparent	High	DPI
Manipulation of data concerning number of students, admission of certain groups (e.g., children of poor parents, girls, minorities), or examination results of students, where funding and/or job allocations are based on these criteria, distorts resource allocation.	Facilitate prosecution of data falsifications in line with the law (data confidentiality and ICT law and other data protection law).	High	DPI
<ul style="list-style-type: none"> Off-budget activities, nontransparent budget processes, & poorly managed expenditure systems provide opportunities for misuse of funds. Weak financial management capacity, inadequate auditing and monitoring systems, poor documentation and reporting requirements, and lack of financial transparency can result in leakages of funds. These can impact on education access, quality, and equity. 	<ul style="list-style-type: none"> All financial transactions should be in line with the finance act and should be executed using the finance system (IFMIS) Build capacity in financial management and put measures for pre and post audit 	High	PS
Failure to provide adequate funding for the decentralization of education financing at the school level hampers the effective delivery of education services.	Implement the decentralization policy	High	Finance
Lack of (or limited) participation of teaching staff, students, parents and other representatives of civil society in financial planning and fund allocation at the school level can weaken accountability and lead to the misuse of funds.	Engage the stakeholders in financial planning to enhance accountability	High	DPI

Risk	Possible Mitigation Strategies	Risk Level	Responsibility
The allocation of resources by politicians to particular schools can make schools vulnerable to political interference.	Grants to institutions should be depoliticized, though politicians may be allowed to make donations of their own resources to institutions	High	DPI
Payments to 'ghost' schools can occur. Lack of capacity to track payments in PPPs can lead to the misuse of funds.	Enhance the EMIS to have accurate and comprehensive statistics on educational institutions.	High	DHRA
Poor information systems enable continuing payments to 'ghost' teachers and employees and to those who have left public service, or have died. This situation distorts resource allocation.	<ul style="list-style-type: none"> Enhance the EMIS and related human resource information management systems Enhance efficiency and effectiveness in human resource management systems Raise the levels of accountability amongst officers in the discharge of their functions 	High	DHRA
Diversion of funds erodes confidence by the public in the capacity of school authorities to use resources appropriately.	Priorities for resources provided to schools and their usage should be clearly outlined	Medium	PS, DPI and Director Finance
Education service providers that receive per student funding from the government can distort enrolment data to obtain higher payments, particularly in the absence of third-party validation of data. This provides opportunities for corruption.	<ul style="list-style-type: none"> Ensure the staff that submit the data forms for the schools are on oath and should be held accountable for the data they submit Deploy ICT in education to enhance accuracy of information 	High	DPI
<ul style="list-style-type: none"> Inadequate procurement expertise leads to loose contracts and poor delivery of services. Limiting the dissemination of information on procurement opportunities to favoured firms jeopardizes procurement based on best value or expertise. Unethical and unprofessional procurement practices undermine the value for money concept Unclear bid selection criteria leave room for manipulation and biased bid assessments. 	<ul style="list-style-type: none"> Enhance procurement capacity or explore hiring or outsourcing to experts Adherence to established public procurement guidelines 	High	Head Procurement
<ul style="list-style-type: none"> Unclear criteria and procedures in recruitment, appointments, and promotion can foster corrupt practices and curb incentives for staff to perform well. Non-implementation of staff performance appraisal systems provides opportunities for arbitrary decision making 	<ul style="list-style-type: none"> Develop an effective and efficient staff recruitment and deployment mechanism Enhance staff performance appraisal systems 	High	DHRA

Risk	Possible Mitigation Strategies	Risk Level	Responsibility
Unethical conduct by officials that circumvent established criteria for entry into institution of learning	<ul style="list-style-type: none"> Put systems in place to ensure adherence to establish criteria and norms for admission, selection and placement of learners Put in place sufficiently heavy sanctions for deterrence 	High	Director TESS and Principals of Colleges
Nepotism, bribes, and by pass of criteria in allocating allowances and fellowships undermine equitable access to scholarships.	Enhance transparency in the selection process	Medium	Loans Board, TESS and DHRA
Lack of capacity for making the curricula responsive to market requirements, particularly in the case of technical and vocational education and training, contributes to the unemployment of graduates.	Enhancing capacity for creating a responsive curriculum and creating the requisite implementation framework for collaboration with the industry	High	Director Standards, Director DODE, Chamber of Commerce, MoL, Higher Education Authority and Industries
Manipulative teacher behaviour that forces learners to purchase certain materials and attend private tuition poses corruption risks.	<ul style="list-style-type: none"> Making it an inappropriate conduct for teachers to compel learners to buy materials they have produced Discourage manipulative teacher behaviour by discouraging private tuition but instead providing remedial lessons 	Medium	Director of Standards and DHRA
<ul style="list-style-type: none"> Fraudulent teaching licences and authorizations for teaching jeopardize the quality of instruction. Paying bribes to higher officials in the system to secure career advancement compromises the integrity of the educational system and the career progression process. 	<ul style="list-style-type: none"> Enhance systems for verification and authentication of teaching licences and authorizations Strengthen existing promotion and appointments system 	Medium	Director TESS and TCZ
Examination malpractices compromises the quality and integrity of educational system.	Strengthen measures to curb examination malpractices and put in severe sanctions for perpetrators of the vice	High	Director Standards and Director ECZ
Inadequate total quality assurance framework, and/or grievance mechanisms jeopardize efficiency and effectiveness of school operations.	<ul style="list-style-type: none"> Put in place total quality assurance framework, develop a service charter and sensitize all ministry personnel on grievance, disciplinary code of conduct and procedures Measures in place to address bureaucracy and red tape inherent in public service. 	Medium	DHRA and Director Standards
Late and erratic budgetary releases towards non PEs	Timely and total budgetary releases	High	PS and MoF
Imprudent use of allocated resources	Prudent use of financial resources and adherence to utilize resources on agreed expenditure lines	High	PS and Director Finance

Risk	Possible Mitigation Strategies	Risk Level	Responsibility
Dual accounting and reporting systems	To encourage our cooperating partners to continuously review our operating systems so that we end up with a robust system which they would have faith in and would build confidence in our accounting operating systems.	Medium	PS and Director Finance
Frequent transfers of trained and experienced accounting personnel in the education sector tend to destabilize the performance of financial management and accounting	Raise the retention levels of trained and experienced personnel in financial accounting	High	Office of the Accountant General
CPs not honouring pledges	Partners to honour pledges	High	Lead Donor DPI & MoF
Inadequate resource mobilization strategy	Put in place resource mobilization strategy	High	
Prohibitive infrastructure costs have can undermine access to quality education.	Streamline the coordination of project implementation with other line departments	High	DPI, ZEPIU & MoI
Low technical capacity for consultants and supervising entities lead to poor quality of infrastructure.	Ensure there is adequate technical capacity for consultants and supervising entities including the requisite financing for projects	High	
Scarcity of skilled labour	Closer technical supervision	High	

