

Ministry of Education
GHANA



EDUCATION STRATEGIC PLAN

2018 - 2030





Foreword

Building on Ghana's achievements in expanding education, the Education Strategic Plan sets out the vision and policies for realising the ambition of transforming Ghana into a 'learning nation'. It recognises the strengths and weaknesses of the current system and prescribes strategies to address the challenges in order to give every Ghanaian child the opportunity to succeed and contribute to national development.

The ESP 2018-2030 revolves around the ambition to improve the quality of education for all in Ghana. Every sub-sector of the education system has a strategic goal and is based on three policy objectives. these are i} improved equitable access to and participation in inclusive education at all levels, ii} improved quality of teaching and learning and STEM at all levels iii} sustainable and efficient management, financing and accountability of education service delivery. With so many possibilities for how to achieve these objectives, some careful prioritisation has been necessary. The lens used for this centred on the impact of a strategy or activity on: learning outcomes, accountability for learning outcomes, and equity. These underline Ghana's serious commitment to improving the quality of education and ensuring that every child benefits from this.

The Education Strategic Plan 2018-2030 puts Ghana on the road towards meeting the Sustainable Development Goals and represents a deliberate reorientation towards this aim, as it replaces the previous ESP 2010-2020. This plan not only sets the long term vision but also how this will be operationalised in the medium term through the accompanying Education Sector Medium Term Development Plan 2018-2021. These two documents have both been informed by extensive analysis, which includes the Equity, System Capacity and Cost and Finance Analysis commissioned specifically for the ESP, as well as a broad range of evidence and research produced by partners and the Ministry. This comprehensive evidence base is brought together in the Education Sector Analysis 2018 and summarises the challenges to which the strategies in the ESP are designed to respond.

A lot of time and effort have brought us to this stage and the Ministry of Education is very grateful to all those who have contributed to the process. This mission to develop an ESP covering the SDGs timespan began in 2016. The process faced various set-backs and has taken the hard work of many people to bring to successful completion. There has been wide consultation and collaboration with partners, ensuring a participatory process that has spanned the entire country. The end result is testament to the perseverance of everyone involved and the Ministry of Education's determination to have a plan that will drive the agenda in education.

It is my expectation that the ESP will be a working document that is embedded in our planning processes from the district to the national level and will shape the future of Ghanaian education to achieve better learning outcomes for national development.



Dr Matthew Opoku Prempeh (MP)
Hon. Minister of Education

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This Education Strategic Plan (ESP) 2018–2030 was developed alongside the Education Sector Analysis (ESA) 2018 and the Education Sector Medium-Term Development Plan (ESMTDP) 2018–2021. All three documents were developed under the leadership of the Ministry of Education (MOE) and supported by the agencies of the MOE. The documents benefited from the contributions of numerous individuals and teams who supported with analysis and drafting, as well as providing oversight and strategic direction. Development partners and other stakeholders also shared qualitative and quantitative data and literature to inform the process and gave significant amounts of time to contribute to and guide the process. The MOE is extremely grateful to all those who have supported the process.

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List of acronyms

ABFA	Annual Budget Funding Amount
ADEOP	Annual District Education Operational Plan
AU	African Union
BECE	Basic Education Certification Examination
BED	Basic Education Division
CBE	Complementary Basic Education
CBT	Competency Based Training
CENDLOS	Centre for National Distance Learning and Open Schooling
COE	College of Education
COLTEK	College of Technology Education Kumasi
COTVET	Council for TVET
CPD	Continuous Professional Development
CSO	Civil society organisation
CSSPS	Computerised School Selection and Placement System
DA	District Assembly
DACF	District Assemblies Common Fund
DDE	District Director of Education
DEO	District Education Office
DEOC	District Education Oversight Committee
DFID	UK Department for International Development
DHS	Demographic and Health Survey
EGMA	Early Grade Reading Assessment
EGRA	Early Grade Maths Assessment
EMIS	Education Management Information System
ESMTDP	Education Sector Medium-Term Development Plan

ESP	Education Strategic Plan
ESPR	Education Sector Performance Report
FBO	Faith Based Organisation
FCUBE	Free Compulsory Universal Basic Education
FPMU	Funds Procurement Management Unit
GAAS	Ghana Academy of Arts and Sciences
GBU	Ghana Book Union
GER	Gross enrolment rate
GES	Ghana Education Service
GETFund	Ghana Education Trust Fund
GHC	Ghanaian cedi
GEU	Girls Education Unit
GIL	Ghana Institute of Languages
GILLBT	Ghana Institute of Linguistics and Bible Translation
GLA	Ghana Literacy Authority
GLSS	Ghana Living Standard Survey
GNAPS	Ghana National Association of Private Schools
GNAT	Ghana National Association of Teachers
GNECC	Ghana National Education Campaign Coalition
GoG	Government of Ghana
GPE	Global Partnership for Education
GPEG	Ghana Partnership for Education Grant
GPI	Gender Parity Index
GSS	Ghana Statistical Service
ICT	Information and communication technology
IE	Inclusive Education

IEC	Inclusive Childhood Education
IEMT	Inclusive Education Monitoring Tool
INSET	In-service Training
IGF	Internally generated funds
JHS	Junior high school
KG	Kindergarten
LEAP	Livelihood Empowerment Against Poverty
MMDA	Metropolitan Municipal District Assembly
MMDCE	Metropolitan Municipal District Chief Executive
MOE	Ministry of Education
MOFEP	Ministry of Finance and Economic Planning
MoGCSP	Ministry of Gender, Children, and Social Protection
mSRC	Mobile School Report Card
NAB	National Accreditation Board
NaCCA	National Council for Curriculum and Assessment
NCTE	National Council for Tertiary Education
NDPC	National Development Planning Committee
NEAU	National Education Assessment Unit
NER	Net enrolment rate
NESAR	National Education Sector Annual Review
NFED	Non-Formal Education Division
NGO	Non-governmental organisation
NIB	National Inspectorate Board
NTC	National Teaching Council
NTECF	National Teacher Education Curriculum Framework
NTVETQF	National TVET Qualification Framework

OER	Open Education Resources
OOSC	Out-Of-School-Children
PBB	Programme Based Budgeting
PBME	Planning, Budget, Monitoring and Evaluation
PHC	Population and Housing Census
PPP	Public-private partnership
PTA	Parent–teacher association
PTPDM	Pre-Tertiary Teacher Professional Development and Management
PTR	Pupil–teacher ratio
PWD	Person with disability
RDE	Regional Director of Education
REO	Regional Education Office
SDG	Sustainable Development Goal
SEIP	Secondary Education Improvement Project
SEN	Special educational needs
SHS	Senior high school
SHTS	Senior High Technical School
SIP	Social Intervention Programme
SLTF	Student Loan Trust Fund
SMC	School Management Committee
SPAM	School Performance Appraisal Meeting
SpED	Special Education
SPIP	School Performance Improvement Plan
SPP	School Performance Partnership
SPPP	School Performance Partnership Plan
SRC	School Report Card

SRIM	Statistics, research, and information management
STEM	Science, technology, engineering, maths
STR	Student-Teacher Ratio
SWG	Sector Working Group
TEI	Tertiary education institution
TLM	Teaching and learning material
TVI	Technical and vocational institute
T-TEL	Transforming Teacher Education and Learning
TVET	Technical and vocational education and training
UIS	UNESCO Institute of Statistics
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNICEF	United Nations Children’s Fund
USAID	United States Agency for International Development
WAEC	West African Examination Council
WASH	Water, sanitation, and hygiene
WASSCE	West African Senior Secondary Certification Examination

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Executive summary

The Education Strategic Plan (ESP) 2018–2030 is the third in a series of strategic plans that have been produced since 2000 (ESP 2003–15; ESP 2010–20; and now 2018–30) and follows from the ESP 2010–2020. During the mid-term review of the previous plan, it was agreed that, given changes at both the international level, with the agreement on the Sustainable Development Goals (SDGs), and changes within the economic and political contexts in Ghana, there was a need to develop a new plan that aligns with the timeframe for the SDGs.

The ESP 2018–2030 provides a 12-year roadmap for education in Ghana. Specific delivery priorities and activities will be outlined in a series of four-year implementation plans which will be aligned with the ESP. The ESP represents the consensus among internal and external stakeholders regarding the need to raise learning outcomes and standards in all educational institutions, and at all levels of education, and to ensure that no child is left out. The evidence base of the ESP can be found in the Education Sector Analysis (ESA) 2018, which provides an in-depth situational analysis of the education sector. The ESA 2018 includes demographic, macroeconomic, and socio-political contextual information, as well as an in-depth assessment of the various sub-sectors of education in Ghana.

The ESP 2018–2030 is divided into five chapters covering the following areas:

- Chapter 1: Key features of the ESA 2018;
- Chapter 2: the ESP framework and theory of change (ToC);
- Chapter 3: priorities and strategies for each sub-sector, including key performance indicators (KPIs);
- Chapter 4: cost and finance, presenting the projected resource envelope for the education sector, the learner population projection, and the financial framework for the plan; and
- Chapter 5: a monitoring and evaluation (M&E) framework.

The annexes illustrate how the ESP is closely aligned to a) Ghana's national development strategy; b) the SDGs (especially SDG 4 – education); and c) the Africa Union education goals and objectives. A further annex shows how the ESP preparation process followed the United Nations Educational, Scientific and Cultural Organisation (UNESCO)/International Institute for Education Planning guidelines. The Implementation Plan for the first four years of the plan from 2018 to 2021 can be found in a separate document, the Education Sector Medium-Term Development Plan (ESMTDP), which lays out in detail how each of the strategies of the ESP will be implemented and how the targets will be achieved.

There are three defining themes running through this ESP. The first is the imperative to focus on improved learning outcomes, which is underlined by the subtitle of this ESP, 'Ghana: A Learning Nation'. Unpacking an improvement in learning outcomes reveals a number of interwoven reforms, strategies, and interventions which come together to create learning systems; from the broad high-level reforms, such as the curriculum reviews (for schools and Colleges of Education (COEs)) to the practical school-level interventions, such as reducing teacher absenteeism, and ensuring more productive engagement with communities.

The second defining theme of this ESP is the recognised need to prioritise policies and activities in the sector, given the constraints of capacity and funding. To address this the MOE has developed a “lens for prioritisation” through which all proposed policies and interventions must be viewed to ensure they are working towards the agreed goals in the best manner possible. The lens comprises three questions, which ask whether the proposal positively impacts a) learning outcomes, b) accountability for learning outcomes, and c) equity.

The third theme of the ESP is the focus on the efficiency of the education system and a willingness to introduce or reform policies to ensure high-quality results with the resources available. With this is a renewed emphasis on the need for strong accountability mechanisms and a sector-wide framework to hold actors to account appropriately. A number of the priorities under the government’s reform agenda work towards greater effectiveness and efficiency of delivery and this ESP provides the framework to link the various reform priority strands to ensure they deliver maximum benefit to the children of Ghana.

Introduction

The ESP 2018–2030 lays out Ghana's vision and goals for the education sector up to 2030, as well as detailed strategies for how these goals will be achieved. The document presents evidence-based priorities and policies formulated after wide-ranging consultations, ensuring that all education stakeholders in Ghana are in agreement on the need for the delivery of quality education to the nation. The ESP provides a clear roadmap for delivery, in which all actors can see where their responsibilities and contributions lie and what they will be held accountable for in relation to the achievement of the vision.

This ESP is the central point of a trio of documents that work together. Alongside it, an ESA was produced as part of the ESP finalisation process. The ESA provides a thorough assessment of the situation of the Ghanaian education sector as at 2018. The ESA highlights the strengths and weaknesses in the sector, including inequities in access, participation and learning outcomes, as well as in the capacity of the system to address these. The analysis has further helped to identify the policy responses to the challenges raised and presented in the ESP. Finally, the ESMTDP 2018–2021 is a detailed operational plan for the first four years of the ESP, which is in line with the National Medium-Term Development Framework. In the ESMTDP the costs of implementing key strategies during the ESP period are considered, with more detail and emphasis given to the first few years as there is greater certainty regarding the requirements and potential resources for this period.

Ghana's education system is organised into seven programme areas and the ESP reflects these in its presentation of sub-sectors. Basic education, which comprises kindergarten (KG) (two years), primary (six years), and junior high school (JHS) (three years), is free and compulsory for all children in Ghana. At the senior secondary level, students choose to follow the academic track of senior high school (SHS) or pursue more technical and vocational courses at a technical institute or specialised courses at a senior high technical school. From there, they progress to tertiary education in either academic or vocational tracks. The mandate of inclusive and special education spans the entire breadth of the education system but the majority of its work is currently focused at the basic level. Non-formal education (NFE) is centred on improving literacy levels for adults and youth in both English and local languages, for those who are not part of the formal education system. Finally, education management is a cross-cutting area which includes both teacher management and the wider education system management, including accountability and planning.

In Chapter 1 this ESP first presents the salient features of the ESA 2018 which have informed strategies at every level of this plan, before explaining, in Chapter 2, the development of the ESP and the lens used to prioritise the policies and strategies. Chapter 3 provides the detail for each sub-sector, providing a narrative explanation, the ToC, and the policy framework. The narrative summarises the challenges of the sub-sector and ongoing programmes that address some of these challenges, before explaining the ToC for each sub-sector and articulating the particular priorities within the policies presented in the framework, as well as the key performance indicators (KPIs). The KPIs for each sub-sector will form the headline measures that will be used to track progress in the education sector. The full list of indicators found in the M&E section provide greater depth for each sub-sector. Chapter 4 presents the cost and finance analysis and projections, including the projected resource envelope for the education sector, the

learner projection, and the financial framework for the plan. Chapter 5 presents the M&E framework, along with the full list of indicators, associated targets and reporting mechanisms to monitor the progress of implementing the ESP, and, finally, the risks which may affect the achievement of the targets, which are outlined along with remediation strategies.

1 Key features of the ESA 2018

This chapter summarises the salient features of the ESA 2018, highlighting the challenges that the ESP will address in order to deliver a quality education for all learners in Ghana. The chapter does not specify policy interventions which are planned or ongoing that respond to these challenges as these are detailed in the policy framework and relevant sub-sector narrative and (in Chapters 2 and 3). The ESA gives an objective assessment of the state of education in Ghana, including a detailed analysis of each sub-sector, as well as setting out the demographic, macroeconomic, and political contexts of the education sector. The ESA provides the foundation and evidence for the ESP 2018–2030, presenting the strengths and weaknesses of the current system. The ESA is therefore structured around the same seven programme areas as the ESP, namely: basic education; secondary education; technical and vocational education and training (TVET); NFE; inclusive and special education; tertiary education; and education management. For further information on any aspect, the reader should refer to the complete ESA 2018, available at www.moe.gov.gh.

1.1 Context of Ghana

A country of just under 30 million people, Ghana recently made the transition to lower middle-income status and has achieved many of the same education successes as other countries in this bracket, such as considerably expanding access to basic education. The country achieved independence in 1957 and is now a multi-party democracy, with 10 administrative regions. Between 2008 and 2012, Ghana was heralded as the pearl of west Africa in terms of economic growth, averaging rates of 8.7%. Since then, the economy has slowed substantially, to an estimated growth rate of 3.6% in 2017, due to a combination of various macroeconomic factors, including commodity prices, inflation, energy rationing, and fiscal consolidation. Meanwhile, expenditure has steadily increased, even while revenue has remained stagnant, thereby increasing the fiscal deficit. Part of this increasing expenditure can be explained by an increasing wage bill, which, in 2013, made up two-thirds of tax revenue. While total government spending as a proportion of GDP peaked in 2014 at 34.3%, this has since been curbed and in 2016 declined to nearly 16%. In terms of inequality, the Gini coefficient has remained unchanged between 2006 and 2010 at 0.41. The incidence of poverty is highest in the northwest of Ghana and lowest in the southeast; these trends are strongly correlated with the regional distribution of the proportion of the population living in urban areas and the proportion of educationally deprived districts.

The Ghanaian population is made up of various ethnic groups, with the Akans constituting the largest group (48%), followed by the Mole-Dagbani (17%), Ewe (14%), and others. The most widely practised religion is Christianity, with Christians making up just over 70% of the population, followed by Muslims, who make up 18%, followers of traditional religions at 5%, and others. While English is the official language in Ghana, there are a number of other language groups, with at least 69 individual languages. The Ashanti, Eastern, and Greater Accra regions make up 50% of the population, while Upper East is the least populated region, with just 2% of the total population. As at 2015, 40% of the population was under 14 years old, 55% were between 15 and 64 years old, and just 1.9% were over 65 years. The number of school-age

children 4–18-years-old are projected to grow at just over 2% per year for the next four years, dropping to a 1.9% growth rate in 2025 and a 1.7% growth rate in 2030.

1.2 Education finance

Ghana has devoted substantial resources to the education sector in recent years and has exceeded associated international benchmarks when including internally generated funds¹, outperforming all other west African countries. Education expenditure has been growing at a faster rate, in both nominal and real terms, than the total government expenditure. The vast majority of funding to the education sector comes from the government budget, with government contributing 87% in 2012 and 78% in 2015. The Ghana Education Trust Fund (GETFund) (an earmarked proportion of VAT) and Annual Budget Funding Amount (ABFA) (an earmarked proportion of oil revenue) have contributed increasing amounts to overall education expenditure since 2012 – predominantly funding government expenditure on goods and services and capital. The proportion of education spending from internally generated funds (IGF) has increased in recent years, reaching 17% in 2015, but this is likely to decrease as free SHS is rolled out over the next two years.

A large part of the discretionary Government of Ghana (GoG) budget (as opposed to statutory funds) is spent on the wage bill, which accounted for nearly 100% of GoG expenditure in 2015. It may appear therefore that little is left for goods and services and capital but as the GETFund and ABFA have grown they have become the source of funding for goods and services and capital. As they are earmarked for education and cannot be used for salaries, the division of revenue is a purely pragmatic one.

Primary education consistently accounted for the largest share of education expenditures until 2015, when it was overtaken by JHS, SHS, and tertiary education. Growth in expenditure in the JHS sector is primarily due to a rapid increase in the number of teachers employed in the sector. This was before the introduction of the free SHS policy, the growth of which will also affect the division of government spending between the sectors. Both NFE, special education, and TVET have consistently attracted the least educational expenditure, often below 3% of the total education budget. Per student spending at the school level varies significantly by region and strongly correlates with regional distributions of poverty in Ghana. Efforts by the government to bring about equity in education spending have met with some success but equity and quality still remain priorities for government spending.

1.3 Education management

Management can be thought of as being divided into two broad categories, teacher management and system management, although the two are clearly linked. In terms of teacher management, absenteeism, attrition, and time-on-task have been widely recognised as a problem, with overall teacher absenteeism as high as 14% in 2014/15 and varying considerably by region. Furthermore, teacher attrition increased to 4% in 2016, from 2% in 2009. Deployment

¹ IGF represent fees and other charges for delivery of services which were charged at SHS and tertiary levels of education. Since September 2017, when free SHS was introduced, the IGF from SHS are being phased out as government absorbs the SHS fees.

of teachers is also a concern, with large regional disparities in pupil–teacher ratios and weak correlation between the number of students and teachers within a district, especially within the KG and SHS sub-sectors. There are various policy actions planned and ongoing in response to these issues, including the Pre-Tertiary Teacher Professional Development and Management (PTPDM) policy, to ensure the proper licensing and registration of teachers.

Oversight of system accountability is the responsibility of three autonomous bodies: the National Inspectorate Board (NIB), the National Teaching Council (NTC), and the National Council for Curriculum and Assessment (NaCCA). While the regulatory agencies are responsible for designing and enforcing accountability structures, the implementation of these structures spans the entire system. Within the Ghana Education Service (GES), for example, the network of regional and district offices down to the school level must play their part in a fully functioning and accountable system. However, the regulatory agencies have hitherto not performed effectively due to inadequate funding, lack of staff, and lack of powers of enforcement, and the education sector as a whole lacks a clear accountability framework. Work is ongoing to strengthen accountability mechanisms, as well as data collection systems and research capabilities at the basic, secondary, and tertiary levels. Initiatives to harmonise various data collection systems are also in progress. In addition, while the private sector accounts for over 20% of enrolment at the basic level, over one-third of technical and vocational institutions, and nearly half of all tertiary institutions, there is little monitoring, collaboration, or regulation across the system. A significantly lower proportion of teachers in the private sector are trained compared to the public sector, and little research has been done on learning outcomes for the private sector.

The internal efficiency of the education system itself is a concern, illustrated in part by the large numbers of over-age children in school. Considering progression from primary to SHS: for every 100 children who enter Primary 1, only 38 leave SHS. This is reflected in results from a cohort simulation model, which show that the proportion of repeaters in each grade of the pre-tertiary system is significantly higher than previously thought. In SHS, for example, the repetition rate is above 12% in every grade.

1.4 Basic education

Generally speaking, indicators of access at the basic education level have improved considerably, but there are still large inequities by income, region, location (rural–urban), and gender. Gross enrolment rates (GERs) exceed 100% for KG and primary and are over 85% for JHS. Net enrolment rates (NERs) are generally much lower, indicating that a large proportion of children who are not of the appropriate age are attending school. One of the reasons for this is late enrolment in KG or primary, but the more prevailing reason is the number of children repeating. Repeater rates are estimated to be as high as 16% in some of the primary grades, and 19% in the first grade of JHS, where it seems that under-prepared pupils are being held back.

Gender parity at the national level has been achieved at all sub-levels of basic education. However, gender disparities exist when this statistic is broken down by region, and, depending on the region, this disparity can be to the detriment of either girls or boys.

The majority of the growth in the number of schools from 2010/11 to 2016/17 has come from the private sector, which operates about a third of the total basic schools in the country. While over 20% of basic school pupils are enrolled in private schools, they are unevenly distributed across the country, accounting for over 60% of enrolment in KG in the Greater Accra region and less than 10% in the Upper West region.

Over 450,000 children are out-of-school; they come mostly from the poorest households and within the three northern regions. One of the factors that may be contributing to the number of out of school children is the shortage of classrooms: national pupil–classroom ratios for public basic schools are 55:1 for KG, 38:1 for primary, and 35:1 for JHS, but there are substantial regional differences in the ratios. The classroom backlog² is estimated to be 5,491 classrooms for KG (24% of the existing classrooms), 4,236 classrooms for primary (5% of the existing classrooms), and 1,247 classrooms for JHS (4% of the existing classrooms).

Completion rates vary substantially by income and region, with pupils from the lowest income quintile being only 0.37 times as likely to complete JHS compared to those from the highest quintile. The proportion of children with disabilities in basic education make up less than 0.5% of enrolment, despite accounting for 1.6% of the total pre-tertiary aged population. While gender may not be the main driver of inequality at the basic level, emerging evidence indicates that adolescent girls' exclusion is reinforced when different sources of inequality – poverty, gender, geography – interact with one other. For example, the mean years of education for rural and poorest girls between the ages of 20 and 24 is 4.4 years, compared to the 13 years for the richest urban girls and 13.2 for the richest urban boys³.

Regarding quality, although the proportion of trained teachers has increased over time, at the KG level it reached just 65% in 2016/17. Learning outcomes have been an area of concern, with wide variations in Basic Education Certificate Examination (BECE) results across regions and by gender: the three northern regions perform particularly poorly, and especially compared to Greater Accra, and these effects are exacerbated when looking at gender disparities by region, where results are skewed against girls in all four core subjects (English, mathematics, science and social studies). While it is not possible to assess BECE results by wealth of the family, the Trends in International Mathematics and Science Study (TIMSS) assessments in 2011 showed significantly lower achievement for those in the 5th percentile compared to those in the 95th percentile. Early Grade Reading Assessment (EGRA) results show that in both 2013 and 2015, only 2% of pupils in Primary 2 could read at grade level, with 50% unable to read a single word. The 2015 Early Grade Mathematics Assessment (EGMA) found that while 46–72% of pupils scored correctly on procedural knowledge sub-tasks, conceptual knowledge sub-tasks were much more challenging, with nearly 75% of pupils sometimes unable to answer a single question correctly. These assessments also show that urban areas significantly outperform rural areas.

Education management at the basic level points to weak accountability mechanisms at the school, community, and district levels. School leadership and management, particularly in

² Calculated from the backlog in those regions that are over the national average.

³ Ghana Statistical Service (GSS) *et al.*, 2015

relation to the oversight and mentorship of teachers, ensuring time-on-task, and the administration of the capitation grant, is also poor. There are a few initiatives in place to strengthen data collection and research: the mobile School Report Card (SRC) system, which collects real-time school-level data, has been piloted in 20 districts, the system-wide education management information system (EMIS) is being strengthened, and a Basic Education Research Group has been set up.

1.5 Secondary education

Access at the SHS level has made substantial progress, with GERs reaching 50% in 2016/17, up from 37% in 2011/12, although enrolment rates vary substantially by region. However, given the national placement system, these variations are indicative of where students are placed and attend, and not necessarily of where they originate. The NER in 2016/17, at 26.5%, is much lower than the GER, and the substantial difference is indicative of large numbers of students in SHS who are not of the appropriate age. Over-age enrolment is primarily due to the relatively high repeater rates throughout the school system, but the repeater rates in the latter two grades of SHS are also high (up to 15%). Many of the students repeating years have not been able to complete the year due to seasonal work, family responsibilities, or lack of fees (prior to the free SHS programme). While they may not have completed the year and failed, technically they are still counted as repeaters for resource purposes.

The transition rate between JHS and SHS reached 68% in 2016/17 and is expected to continue to rise with the introduction of the free SHS policy. Within SHS, gender parity has nearly been achieved, reaching 0.96 in 2016/17, but there are substantial inequities in access across wealth quintiles: those coming from the poorest 20% of households, the most deprived districts, and/or from rural areas are about five to six times less likely to access SHS. A contributing factor to the challenges in accessing SHS is the shortage of schools and classrooms. In 2015/16 the national pupil–classroom ratio for public SHS stood at 46:1, with substantial regional differences. Northern and Upper East regions had pupil–classroom ratios of over 50:1 and in total the shortfall in the number of classrooms in 2016 was 2,894, 16% of the total SHS classroom stock. Learners with disabilities are also underrepresented in SHS: they make up only 0.2% of enrolment in SHS, despite accounting for 1.7% of the senior secondary school-age population.

Textbook–student ratios have declined substantially since 2011/12, reaching 0.5 in 2016/17 for maths, and textbooks production is often delayed. There is also a need for investment in infrastructure to address increasing student to classroom ratios, which reached 48 in 2016/17, despite the much lower student–teacher ratios of 21 in 2016/17. In terms of learning outcomes, results from the West African Senior Secondary Certificate Exam (WASSCE) have been poor for both core and elective science and mathematics subjects, particularly in 2015. These results diverge substantially across regions, with the three northern regions performing most poorly. Gender disparities in performance, to the detriment of girls, exist across all regions for maths, science, and social studies, and, in the three northern regions, for English as well. At the school level there are large disparities even within the same region: in some schools, nearly 100% of students achieve grades of A1 to C6, and in others 0% do so.

School management and leadership is key, both for the roll-out of the free SHS policy and to arrest the poor trend in examination results. A research agenda at the secondary level is in

place that will continue to produce pertinent research, especially on quality outcomes and equity. Disbursements for the free SHS policy were rolled out in a timely fashion for the first term of the 2017/18 academic year, which allowed for adequate planning and implementation.

1.6 TVET

Access to technical and vocational institutions has steadily increased, both in terms of Senior High Technical Schools and technical and vocational institutions. However, efforts to improve access within this sub-sector is constrained by low public perceptions: technical and vocational education is usually thought of as an option for under-performing students and many who are placed in these institutions often do not end up attending. Only 2.1% of students selected these institutions through the placement system in 2013. This is further compounded by a low absorption capacity of existing technical and vocational institutions, and the poor state of training facilities and equipment. The participation of women and persons with disabilities (PWD) in this sub-sector is particularly low, especially in traditionally male-dominated areas such as engineering and construction: 26% female enrolment was registered for 2015/16 and in Senior High Technical Schools this number was just 11% in 2016/17. Currently, technical and vocational education is limited in scope and does not cover the diverse needs of learners or of Ghana's economy. The relevant institutions are also ill-equipped to provide an adequate education and all of these factors contribute to the poor perception of TVET.

There is a mismatch between the skills supplied in TVET institutions and demand for skills in the labour market, and there is also low industry investment and involvement in this sub-sector. In addition, only 52% of technical and vocational institute teaching staff possess technical qualifications, while staffing norms and standards vary substantially throughout the country. Learning outcomes in this sub-sector are also poor, especially for students at the Technician level, with only 30% of students on average passing the Technician I examinations.

Data collection mechanisms for the TVET sub-sector are inadequate, especially as this sub-sector is administered across more than 15 ministries, with poor coordination, although this will be addressed through the realignment of the TVET sub-sector. In addition, detailed data on teacher training and facilities is lacking, leading to an ineffective diagnosis of the quality of inputs of this sub-sector. The TVET sub-sector also suffers from a lack of harmonisation and coherence, and its operations are hampered by its fragmented nature. The TVET sub-sector also receives less than 3% of the overall education expenditure.

1.7 Inclusive and special education

According to the Population and Housing Census 2010, the overall prevalence of children with disabilities aged between 4- and 17-years-old in Ghana is 1.6%, or 130,000 children, with wide regional disparities. However, this may be underestimated due to low detection rates. According to the EMIS, in 2016–2017, about 29,000 pupils with disabilities were registered at basic and senior secondary (excluding TVET) levels. Among these pupils, 6,130 were enrolled in special schools. However, enrolment of children with disabilities ranges from just 0.2% to 0.4% of total enrolment in KG and SHS. Children with disabilities have lower attendance rates compared to children without disabilities at all levels of pre-tertiary education, and the lowest attendance

rates are at the SHS and Technical and TVET levels. It is also clear that children with disabilities are not progressing through the education system and a large proportion of those enrolled are over-age. The lack of facilities in basic and secondary schools disproportionately affects children with disabilities, with almost no regular basic schools having hand-rails, and only 8% being equipped with ramps. There is anecdotal evidence to suggest that there is stigma toward children with disabilities.

The proportion of trained teachers in special schools is higher than that in regular schools and PTRs are lower in special schools compared to regular schools, ranging from 7 to 11. Overall, there are consistent gaps in learning outcomes in reading, writing, and maths between pupils with and without disabilities; these differences are particularly stark for writing in Ghanaian languages and mathematics, but exist across all other areas as well, according to the Ghana Living Standard Survey 2013. Data collection for inclusive and special education is limited and spread across different data collection instruments, with varying definitions, leading to a reliance on national survey data which in turn leads to an inability to effectively diagnose this sub-sector. This sub-sector is also severely underfunded: in 2015, only 0.6% of total recurrent education expenditure was spent on inclusive and special education, which is concerning given the extra needs of the learners concerned and the fact that the recurrent costs of inclusive education in special schools are much higher than those in regular schools.

1.8 Non-Formal Education (NFE)

Of those who complete nine years of basic education, only 54% of males and 43% of females acquire literacy skills that are likely to persist through adulthood. There is hence a strong need for adult literacy programmes, even for those who have attended formal schooling. The main intervention that the MOE employs to improve literacy rates for those working in the informal economy is the National Functional Literacy Programme. The latest batch of the National Functional Literacy Programme in local languages enrolled over 14,000 learners; however, this falls severely short of addressing the needs of the more than 1.2 million illiterate adults in Ghana, a large proportion of whom are concentrated in the three northern regions and within the lowest income quintiles. While other initiatives have also been employed, such as delivering literacy programmes on the radio, this is severely underfunded and progress has slowed substantially. Attempts to develop a literacy phone application have also suffered from a lack of funding. Funding gaps for this sub-sector affect quality measures in terms of training for facilitators, teaching and learning materials, curriculum review, supervision, and even the printing of materials.

NFE received the lowest amount of government education expenditures in 2015. Such expenditures are almost entirely recurrent and demonstrate a low commitment to NFE programmes. Efforts of the Non-Formal Education Division (NFED) of the MOE to provide literacy programmes are hamstrung by the division not having agency status, and thus not benefitting from the associated clarification and ability to implement its mandate that such a status would confer (as in the case of GES, the Ghana Library Authority etc). In addition, adult literacy is a cross-cutting issue, which affects various ministries and sectors; however, at present there is no national policy on NFE and adult learning, which hinders effective implementation and oversight, and means that this sub-sector remains fragmented.

1.9 Tertiary

Both the number of, and enrolment in, tertiary institutions have increased over time, as the GER has improved but remained low, at 14.2% in 2014/15. Private tertiary institutions directly under the MOE make up almost half of the total number of total tertiary institutions, but only 19% of enrolment. Applications far exceed admissions, especially for public universities, and female applications and admissions are much lower in number compared to males. In 2014/15, 25% of females and 29% of males who applied were admitted to public universities; in 2014/15, 37% of public university applicants were female and the corresponding figure for polytechnics was 35%. There are also wide income and regional disparities in completion at the tertiary level: the parity index for completion rates at the tertiary level between those from the poorest and richest income quintiles is 0.06. Enrolment in open and distance learning courses has increased for some institutions (e.g. University of Cape Coast), but has declined for others (e.g. University of Education Winneba). Current course offerings across universities are often not diversified and facilities to accommodate students with disabilities are often inadequate.

Regarding quality, PTRs are much higher than the norms recommended by the National Council for Tertiary Education (NCTE), and less than 40% of teachers have terminal qualifications, a statistic that varies substantially across universities. The targeted ratio of enrolment in science subjects to enrolment in arts subjects is 60:40, but at the moment the ratio is 40:60, and this has remained stagnant for a number of years. The annual publications per lecturer per year is only 0.5 and only one Ghanaian university is ranked among the top 25 universities in Africa.

Given that most tertiary institutions are self-regulated, the NCTE and the National Accreditation Board (NAB) have limited capacity and legal authority, which constrains their efforts to serve as supervisory entities. Data for tertiary institutions are usually collected at the end of the academic year, making it difficult to effectively impact decision-making within the year. In terms of funding, the government typically provides between 50% and 55% of the total financial resources provided to the sub-sector, the vast majority of which goes on staff salaries. Internally generated funds are the second largest source of funding for the tertiary sub-sector and the GETFund typically provides 8–10% of the sub-sector's funding. However, in spite of these funding sources, there have been substantial gaps: in the 2016 academic year, there was a funding gap of 45%. The Student Loan Trust Fund has been beneficial in increasing access for financially disadvantaged groups; however, it faces funding challenges in financing loans for all students. The establishment of new institutions, upgrading of other institutions to tertiary status, and absorption of private institutions into the public sector by government will place further pressure on funding to the tertiary sub-sector.

1.10 Wider policy context

1.10.1 Intersectoral coordination and collaboration

Under the GoG other ministries, in addition to the MOE, play an important role in pursuing the objectives of the ESP. These ministries include the Ministry of Gender, Children and Social Protection (MoGCSP) and the Ministry of Health, as well as number of ministries that have supported TVET provision (see the section on the TVET sub-sector in chapter 3 for more

information). In addition to the resources allocated to education through the MOE and its agencies and District Assemblies, these line ministries contribute programmes and resources to the education sector.

The MoGCSP has a mandate to: coordinate and ensure gender equality and equity; promote the survival, social protection and development of children, vulnerable and excluded and PWD; and integrate fulfilment of their rights, empowerment, and full participation in national development. It therefore has a key role in achieving improved equity in the education sector – one of the priority themes of this ESP. For example, the MoGCSP works with partners to promote gender equity through such policies as the National Gender Policy, 'Mainstreaming Gender Equality and Women's Empowerment into Ghana's Development Efforts', which will affect girls' potential to access and stay in school. In addition, the MoGCSP oversees and finances key social protection programmes which contribute to education including, as follows:

- The national School Feeding Programme creates the opportunity to bring both girls and boys into school by ensuring that they are free from hunger, enabling them to concentrate and focus on learning. The goal of the programme is to deliver a well-organised, decentralised intervention that provides disadvantaged school children with nutritionally adequate, locally produced food. In 2015, the programme reached 3,000 schools and about 1.3 million pupils benefited from a daily meal at their school, with the objective of increasing access to support those most in need.
- The Livelihood Empowerment Against Poverty (LEAP) programme is a cash transfer programme which has reached over 200,000 extremely poor and vulnerable households. It is a GoG programme in partnership with the UK Department for International Development (DFID), UNICEF, and the World Bank. Households with orphaned and vulnerable children are one of the priority categories of the programme. LEAP is effectively an unconditional transfer but GoG has aimed to apply co-responsibilities in relation to the receipt of cash grants, such as children going to school. The LEAP Endline Impact Evaluation found some impact by the programme on education, with higher enrolment, attendance, and educational expenditure for LEAP beneficiary children compared to similar children in the Ghana Living Standard Survey sample. For example, LEAP is reported to have assisted beneficiary households to meet the educational needs of their children including the purchase of text books, school uniforms, and bags, among other things. For the next phase of LEAP the establishment of the Ghana Household Registry is expected to improve the targeting of LEAP beneficiaries to access cash transfer services and linkages to productive and financially inclusive employment opportunities, as well as to improve linkages with other social protection programmes, e.g. the School Feeding Programme.

An intersectoral approach is also key for the inclusion of children with disabilities in the education sector. There is a need for linkages between educational institutions and social protection, health, and community-based rehabilitation to enable children with disabilities to be supported to access learning and to enter schools with a child-friendly environment and where teachers are trained to practice inclusive education. As laid out in the Inclusive Education policy, the MOE will liaise with the Ministry of Health and Ghana Health Service to support children with disabilities, with the Ministry of Health making annual budgetary allocations to support the early detection of disabilities amongst children. Between schools and community health services there is also a need for a pupil/student early assessment processes. This needs to include, but

not be limited to, screening, treatment, and referrals, and should include the provision of assistive devices and support services.

The MOE also works with the Metropolitan Municipal District Assemblies (MMDAs) in the provision of programmes targeted largely at the basic education level. The funding for this comes from the District Assemblies Common Fund (DACF) and it is at the discretion of each District Assembly how much to allocate to education, based on the local need. Infrastructure improvements form about 80% of District Assembly spending on education, which complements the rehabilitation and construction that is funded under the MOE budget. In addition to infrastructure, the MMDAs spend the majority of their remaining education funding in supporting scholarships and bursaries for pupils, and in the provision of additional teaching and learning materials (TLMs) and resources for basic schools. A small part of the DACF allocation is reserved for MPs to initiate and expand development projects in their constituencies, and many of these projects are also concerned with expanding and improving education.

1.10.2 Decentralisation

The proposal for the decentralisation of education service delivery in Ghana has a long history. A firm commitment to decentralisation has now been made, as a provision on the decentralisation of basic education is part of the Pre-Tertiary Education Bill. However, it is not possible to estimate when the bill will be voted into law, and thus when the proposed new structures will be functioning.

The decentralisation of basic education lays the responsibility for the provision and management of first cycle schools (up to JHS) with the District Assembly and more specifically with the Education Section under the District Department for Education, Youth and Sports. The District Assembly will be responsible for infrastructure, equipping schools, establishing new schools, and other functions as described by the Minister of Education. The Director of the District Department of Education, Youth and Sports, under the advice of the head of the District Education Section, will be responsible for the appointment, promotion, discipline, and dismissal of the head teachers and staff of first cycle schools in the districts. As they only have authority over their own district, it is envisaged that inter-district transfers of school staff will be effected through the office of the Head of the Local Government Service. As the details of the implementation of decentralisation are agreed it will become clear on a district by district basis which assets and liabilities of the GES at the district level will be transferred to the District Assemblies.

The responsibility for second cycle schools will remain with the MOE and GES headquarters, whilst oversight will remain the responsibility of the regions, as in the current structure. The MOE will continue to be responsible for the infrastructure of second cycle schools and the regional education department will be responsible for ensuring that schools with children with special needs have access to funding to improve existing infrastructure. The budget for the regional education department will form part of the GES headquarters budget.

2 Policy framework of the ESP

This chapter outlines the process of producing this ESP, as well as the guiding principles and priorities in policy formation and how the plan is situated within other national and internal goals.

2.1 ESP development process

In October 2015, Ghana's Minister of Education set up a sectoral taskforce to develop a revised ESP 2018–2030 that would subsume all previous plans. The main rationale for this was to align Ghana's education priorities with the changing global agenda for development, anchored in the SDGs. To pursue this, there was a need to assess the state of education within the current macroeconomic context, while also considering inputs from wider stakeholders and incorporating national and international priorities and aspirations. Given this extensive consultative process, a team of national experts drafted the relevant documents and consolidated input from various stakeholders. It was also recognised that there was a need for more analysis on systems capacity, equity, and financial costing, in order to finalise the ESP, and teams of experts were assembled to conduct this additional analysis. The MOE set up a Technical Team to provide technical oversight and support to the teams of consultants, taking responsibility for a thorough, evidence-based, and consultative process of policymaking, and a timely, useful, and high-quality final ESP 2018–2030, as well as the associated ESMTDP 2018–2021. The Technical Team fed into a Steering Committee, which took key decisions regarding policy objectives, sub-objectives, activities, indicators, and targets. Feedback on the ESP was received through an annual conference hosted by the MOE and through three regional consultations. A more extensive presentation of the process of drafting the ESP 2018–2030 is provided in Annex B.

2.2 Development of the ESP

2.2.1 Role of the MOE

The MOE, established under the Civil Service Law 1993 and the PNDC Law 327, is mandated to provide relevant education to all Ghanaians as a vehicle for individual and national development. The goal of the MOE is to formulate and implement policies that ensure the provision of quality and accessible education to all Ghanaians to meet the needs of the labour market, and to accelerate the acquisition of requisite skills to achieve human development, good health, poverty reduction, national integration, and international recognition, as well as to create an honest, creative, and responsible citizenship.

The MOE's vision, mission, function, and core values are outlined below.

2.2.1.1 Vision

A dynamic sector that prepares and equips all Ghanaians with relevant education and skills to promote socioeconomic development and national orientation.

2.2.1.2 Mission

To provide relevant education, with an emphasis on science, information, communication, and technology, to equip individuals for self-actualisation and peaceful coexistence, as well as skills for the workplace for national development.

2.2.1.3 Functions

For the purpose of achieving its objectives, the MOE performs the following functions:

- initiates and formulates policy options on education for the consideration of government;
- initiates and advises on government plans;
- undertakes research as may be necessary for the effective implementation of government policies;
- reviews government policies and plans;
- coordinates the implementation of sector policies and strategies;
- coordinates education stakeholders, such as development partners, civil society, and teacher unions etc; and
- conducts periodic M&E.

2.2.2 Policy direction of the ESP

2.2.2.1 Guiding principles

The ESP reflects five guiding principles:

- Access and equity: Equal opportunity to obtain access to education and to learn, and the provision of an environment that is conducive to learning and achievement of learning outcomes and that demonstrates fair and just assessment.
- Quality: Achievement of high-level standards and system responsiveness at all levels of education.
- Relevance: Learning, including skills development, which is responsive to individual, community, and national development needs.
- Efficiency and effectiveness: Management of all resources that ensure value for money to achieve desired goals.
- Sustainability: Judicious utilisation of human, financial, and material resources to ensure balanced and continual development of the education system.

2.2.2.2 Education strategic goals

The overall goal of the education sector is ‘to deliver quality education service at all levels that will equip learners in educational institutions with the skills, competencies and awareness that would make them functional citizens who can contribute to the attainment of the national goal’.

This goal is in accordance with the Education Act 778 and is broken down into seven education strategic goals, which are linked to different sub-sectors of education, as follows⁴:

Table 1: Education strategic goals and relevant sub-sector

Education strategic goal	Education sub-sector
Improved equitable access to and participation in quality basic education	Basic education
Improved equitable access to and participation in quality SHS education	Secondary education
Strengthened competency-based skills development in TVET	TVET
Improved opportunities for non-literate youth and adults to have free access to meaningful quality education and training	NFE
Improved access for persons with disability, the vulnerable and the talented	Inclusive and special education
Improved equitable access to world-class tertiary education	Tertiary education
Improved planning and management efficiency in the delivery of education	Education management and financing

These strategic goals are drawn from the broad vision and mission for Ghana's education, policies, international commitments, and key principles.

Each of the key guiding principles are organised along three policy objectives:

- improved equitable access to and participation in inclusive quality education at all levels;
- improved quality of teaching and learning and science, technology, engineering and mathematics (STEM) at all levels; and
- sustainable and efficient management, financing and accountability of education service delivery.

Within each policy objective, sub-policy objectives are outlined, which are linked to strategies and activities and serve as the basis for the policy framework of the ESP (see Figure 1). The MOE used this framework to organise the challenges highlighted by the ESA and to guide the process of identifying appropriate strategies and activities to address these challenges, which will ultimately lead to the achievement the goals laid out above.

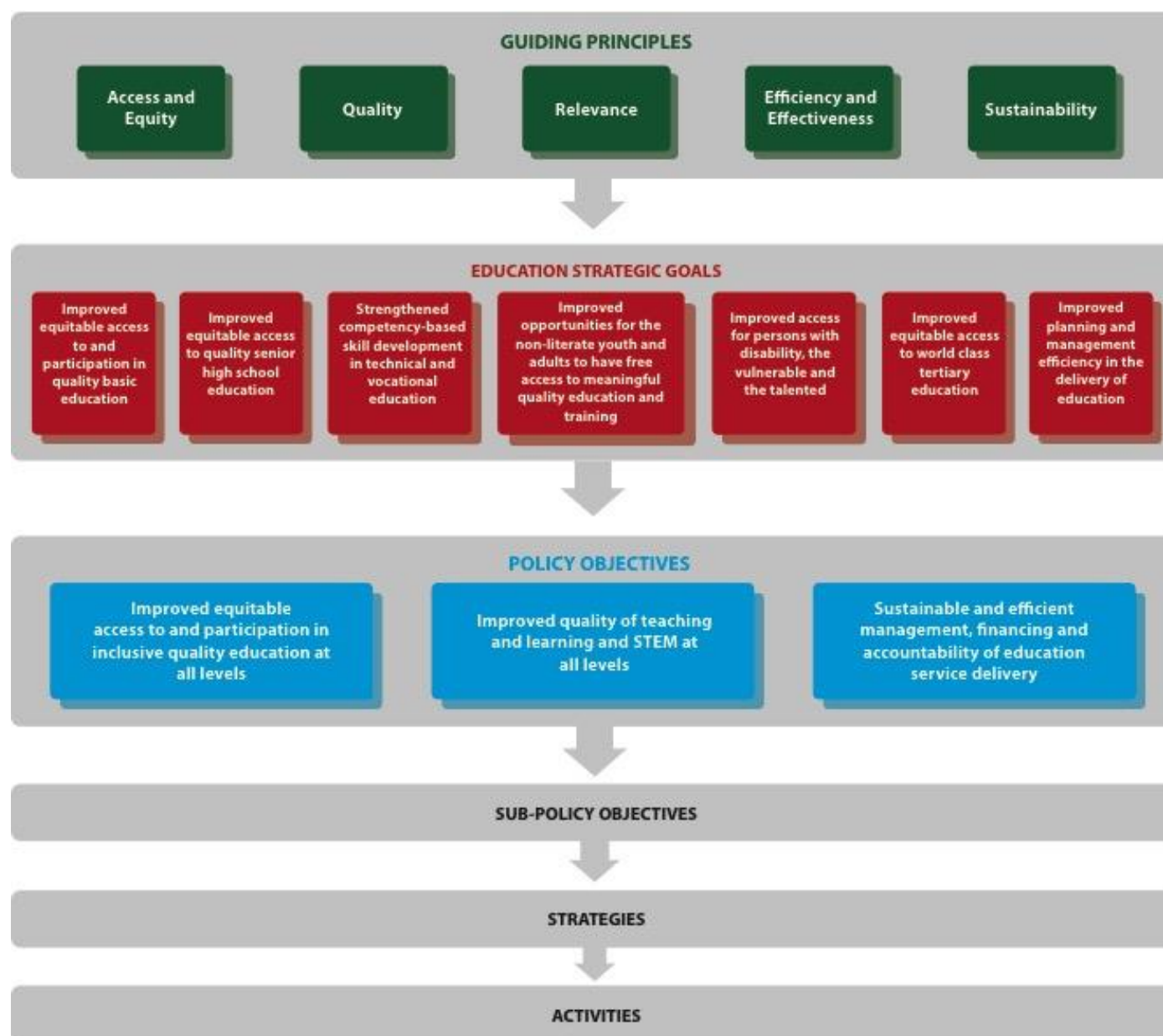
In order to ensure a coherent response to achieving the overall goal and vision of the education sector, the MOE developed the sector-level ToC to articulate the inputs necessary to produce the required outputs, outcomes, and impact at a sector level. The ToC is primarily oriented towards supporting all children and youth to progress through the different levels of education in a timely manner; towards a more equity-oriented sector that is defined by free education from KG to SHS; and towards a more responsive and diversified tertiary sector. Efforts to improve the outcomes of the education sector in order to support educational progression, as well as to contribute to socioeconomic development and national priorities, will be supported by improving the skills and motivation of teachers, providing a more relevant curriculum (supported with

⁴ Henceforth, for brevity, the education sub-sector will be used in lieu of the education strategic goal.

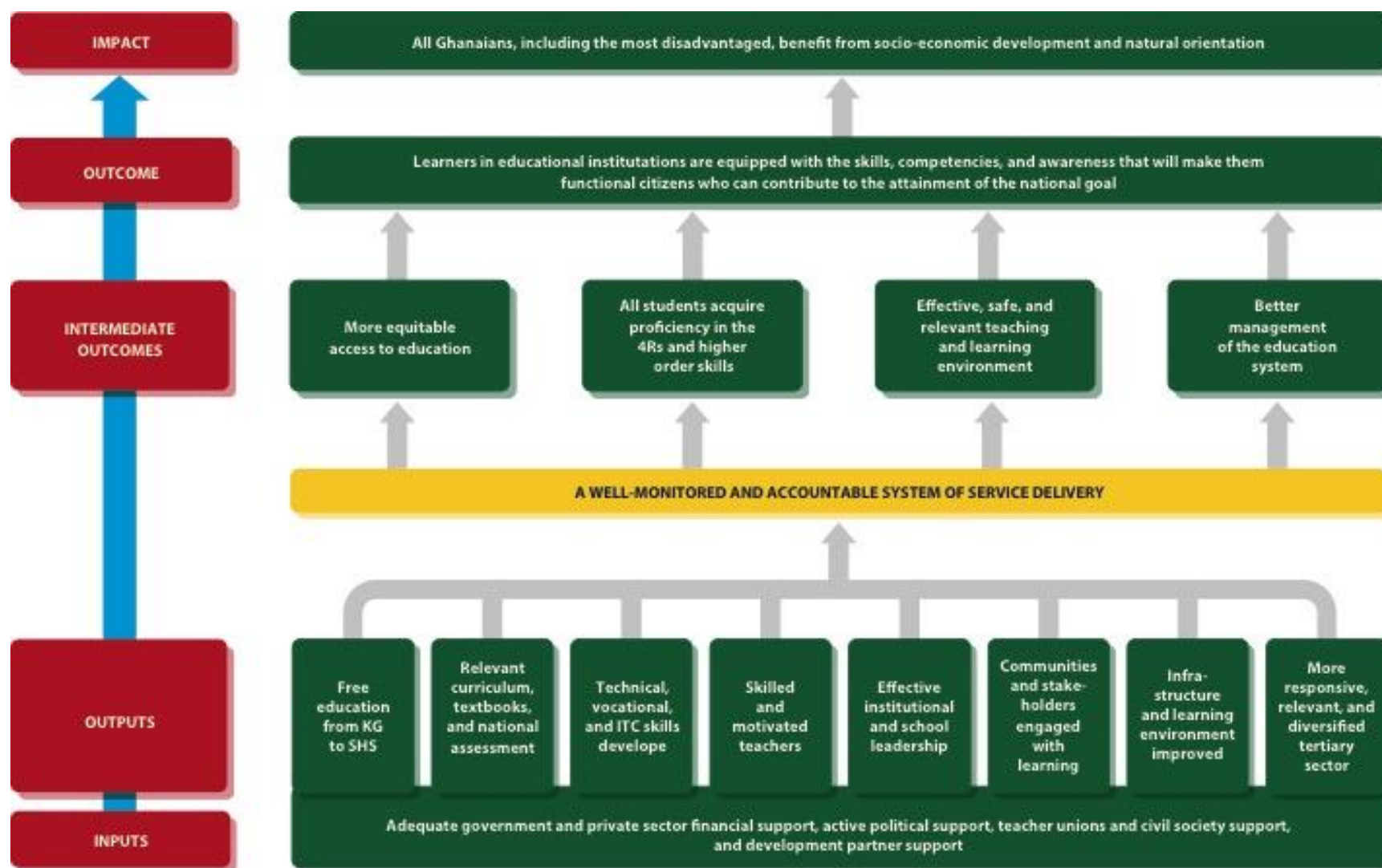
TLMs), developing skills such as information and communication technologies (ICT), and using assessment to inform the teaching and learning process. Assessment will also contribute to strengthening learning accountability, and strengthened school and institutional leadership and management will support more effective and accountable schools and institutions. Communities and stakeholders will also have an important role to play in strengthening accountability and supporting the teaching and learning process. The education sector ToC is based on the assumptions that adequate resources are available for the sector to function effectively and that political and stakeholder support, including the support of development partners, is sufficient to ensure the education system continues to strive for improved outcomes and more efficient and effective use of resources.

Sub-sector-level ToCs have also been designed to reflect the specific requirements of the different sub-sectors. The input and output levels of the sub-sector-level ToCs are specific to the sub-sector challenges highlighted in the ESA, with the intermediate outcomes at a level that contribute to the sub-sector outcome which represents these strategic sub-sector goals, as identified in Figure 1 below.

Figure 1: Policy framework for the ESP 2018–2030



ToC for education sector



2.3 Reform agenda and education sector priorities

Clear policy imperatives emerge from the ESA, which the MOE has embraced, such as the need to improve the quality of teaching at the pre-tertiary level through teacher education reform and the importance of improved TVET coordination through the realignment of that sub-sector. The policy reform imperatives emerging from the ESA resonate with GoG priorities and are reflected in the high-level education reform agenda and delivery framework (see Annex A for more details). This ESP lays out in detail how the various strands of this ambitious reform agenda represent practical responses to the challenges in the sector. The reform agenda has a number of pillars that predominantly affect particular levels of education (basic, secondary, TVET, and tertiary), as well as a number of key reforms to strengthen education management (see Table 2). Furthermore, some represent whole-sector reform agendas, such as teacher education reform and basic education curriculum reform, as well as initiatives that will be piloted in the short to medium term to consider whether they merit a scale-up effort to contribute to sector development (for example public–private partnerships and improving inspection).

Table 2: Education reform agenda priorities

Education management reforms	Education reforms focused on different levels of education
<ol style="list-style-type: none"> 1. Operationalisation of Pre-Tertiary Teacher Professional and Management Development Framework 2. School supervision and inspection 3. Basic education decentralisation 4. Public–private partnership (PPP) initiative 5. GES institutional reform 6. Legal, institutional, and regulatory reforms 	<ol style="list-style-type: none"> 1. Pre-tertiary education curriculum reform 2. Secondary education reform 3. Teacher education reform 4. TVET reform 5. Tertiary education reform 6. ICT in education reform

This ESP also situates the reform pillars within the appropriate sub-sectors, and it identifies the links between the various reform pillars and other strategies in the ESP so that the associated implementation is not carried out in silos. In conjunction, an Education Reform Secretariat will be set up to provide coordination and oversight of the reform agenda. Furthermore, the ESP lays out the supporting strategies which are required to ensure the success of the reform agenda, such as ensuring an improved teacher deployment system to support the teacher professionalisation reforms.

Meanwhile, GoG recognises the need to prioritise policies and strategies, given the constraints on capacity and funding. The MOE has therefore developed a ‘Lens for Prioritisation, through which all proposed policies and strategies are viewed, to assess their potential to move the education sector towards its goals. If a policy does not strongly and positively stand up under this lens then it may be deprioritised if there are capacity and financial limitations to effective implementation. There are three questions underpinning this lens for prioritization:

- *Does the proposal have a positive impact on learning outcomes?*

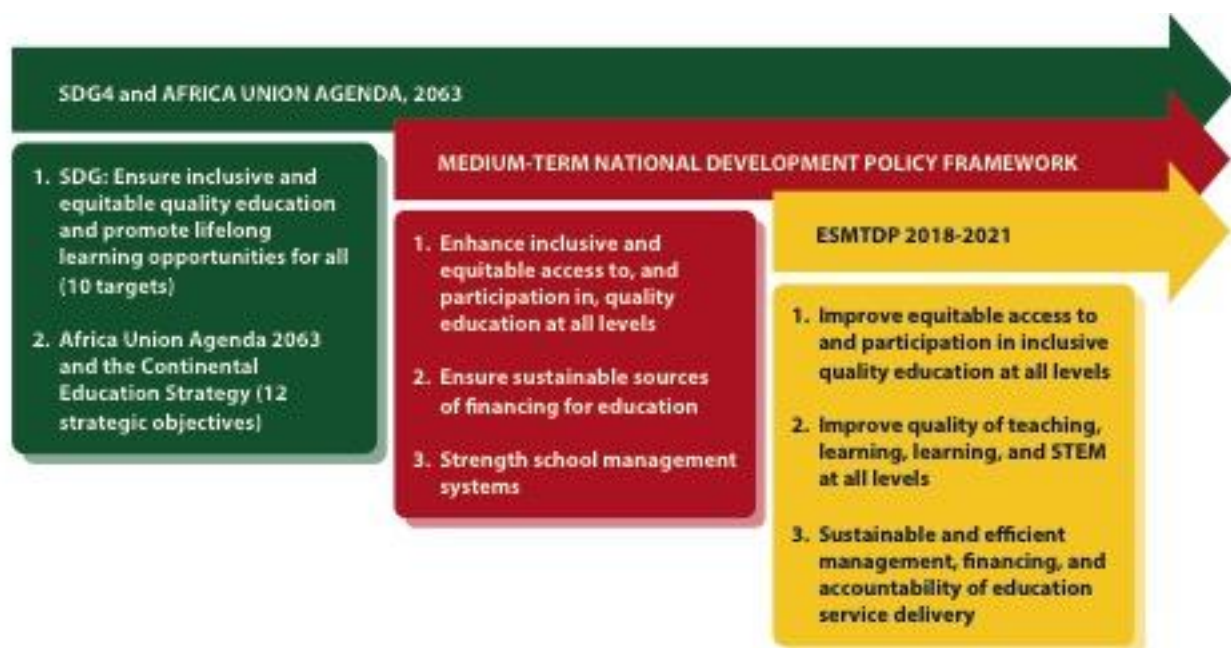
- Does the proposal have a positive impact on accountability for learning outcomes?
- Does the proposal have a positive impact on equity?

Furthermore, the development of the ESP has thrown into sharp relief the question of the efficiency and effectiveness of the education system. With limited resources, the management and accountability of the system is crucial for its success and this has spurred the addition of strategies to pave the way for improved efficiency in the delivery of education across sub-sectors. Improving efficiency will be a priority during the implementation of this ESP. It is expected that improved efficiency will release capacity or financial resources that will be used to deliver improved learning outcomes, accountability for learning outcomes, and equity, in line with the 'Lens for Prioritisation.'

2.4 Alignment of the ESP with national and international goals

The ESP aligns closely with the SDG for education (Goal 4), the African Union Agenda 2063, and the overall National Development Plan. Based on the ESP, a four-year ESMTDP 2018–2021 was also developed, in accordance with the guidelines from the National Development Planning Commission (NDPC). Every four years, more detailed M&E will be conducted and strategic plans will be linked to resources mobilised from internal and external sources, in order to accomplish the long-term goals. Figure 2 below shows how the ESMTDP flows from the national four-year agenda. The ESP 2018–2030 sits within the SDG and African Union 2063 visions as a longer-term plan for the education sector. Annexes C, D, and E elaborate the national and international commitments to education.

Figure 2: Flow of international policies to national education sector policies



3 Sub-sector policy objectives, key issues, and strategies

3.1 Basic education – Improved equitable access to and participation in quality basic education

Basic education should provide all learners with the foundational skills and confidence to prepare themselves to make informed choices and choose between different learning streams at secondary level. The strategic goal for basic education is ‘improved equitable access to and participation in quality basic education’. In recent years, access to basic education has improved significantly but there remain a number of key challenges to the sub-sector, as highlighted by the ESA, and these are the focus of this sub-sector of the ESP.

Age-appropriate enrolment is a challenge for the basic education sub-sector which currently hampers the efficiency of the system. There are significant numbers of under-age children enrolled in KG for whom the sector must currently allocate resources, from its limited resources, as well as over-age children at all three levels of basic education. Poor quality education in KG can mean that pupils leave without strong foundations and are not school-ready, and this is especially critical for children from disadvantaged backgrounds. Grade repetition is also a serious challenge in primary and JHS, which is an indication of a system lacking in the efficiency and quality of teaching and learning. The high repetition rate in JHS1 is evidence of the number of under-prepared children transitioning from primary to JHS1. Learning outcomes are poor in primary, where in 2013 and 2015 EGRA assessments found that only 2% of Grade 2 pupils could read at the correct grade level and 50% could not read a single word. Furthermore, these assessments are sample-based, and the system currently lacks national annual assessments at primary level. At JHS, the BECE results reveal geographical inequities in learning outcomes, as well as disparities between boys and girls, with girls consistently performing poorly, especially in maths and science.

Disparities in access are still a feature of the basic education system, particularly at the JHS level, where girls or boys suffer depending on the region: for example, girls from the Northern and Western regions tend to have lower enrolment than boys. The marked and continuing rise in private school enrolment is a significant feature of basic education and points to either poor provision or the poor quality of the public education system in particular localities. The poor provision of basic school facilities is a challenge in regard to improving access and plays a role in the persistent numbers of out-of-school children in Ghana. Finally, management at the basic school level suffers particularly from a lack of accountability in the system and the poor functionality of parent–teacher associations (PTAs) and School Management Committees (SMCs) in many areas at the local level. Linked to this challenge at the basic level is the poor management and supervision of teachers, and the lack of effective deployment to ensure the teaching resources are meeting local needs. This issue is addressed more explicitly under the education management section of the ESP.

Many of these issues are well known in Ghana and are already being addressed through ongoing programmes. The capitation grant to basic schools has recently been doubled in value to include both a base grant element and a per capita element, based on learning from the Ghana Partnership for Education Grant (GPEG) project, which ran from 2013 to 2016. The

Complementary Basic Education (CBE) programme is providing education in the community to thousands of out-of-school children to allow them to transition into mainstream education and so improve access to school. Furthermore, targeted social intervention programmes, such as the provision of school uniforms and the School Feeding Programme, administered by the MoGCSP, remove barriers to basic education for the disadvantaged. Work to review and rewrite the basic education curriculum is already ongoing and seeks to integrate creative skills and also improve the quality of instruction through reviewing the language of instruction policy and implementation, based on learning from ongoing interventions and evaluation. There are also various pilot initiatives to improve data collection, dissemination, and use to effectively manage local education provision, such as the mobile School Report Card (mSRC) tool.

The ToC for basic education lays out how the acquisition of foundational skills at KG and primary level, followed by JHS to expand and build on these core skills, will produce learners that are ready to move on to the next stage of their education. In order to make this transition seamless, the curriculum must allow pupils to opt for different learning streams following basic education, whether they choose a vocational or academic track. This ToC follows the same structure as that for other sub-sectors, with necessarily broad assumptions, including the following:

- continued and sufficient investment in the education sector;
- effective community engagement in education to promote a culture of learning and social accountability;
- achieving efficiency gains in the system which are elaborated in the financing framework; and
- successful implementation of the reform agenda, with specific reference to teachers, to ensure that issues related to recruitment and deployment, professional standards, working conditions, and accountability are appropriately addressed.

The policies and interventions proposed in this ESP enter the ToC at the input stage, to provide the building blocks upon which this change will be brought about. With all of these inputs, there is a recognised need to ensure a strong accountability system which at the basic level focuses particularly on ensuring that teachers and school leaders have the relevant skills and perform their basic duties.

All of the policy objectives presented in below (in 3.1.1.) are important for improving the quality of the basic education delivered in Ghana but among them there are priorities that will be addressed in the medium term. The most significant challenges to achieving quality basic education in Ghana relate to the quality, equity, and efficiency of the system, and this is where the focus of GoG's immediate reforms and policies lies. The basic education curriculum is being revised to ensure a greater focus on the foundational skills of reading, writing, arithmetic, and creativity. This will include setting standards for learning at each grade level and will lead directly to creating a national standard-based assessment at primary level in order to measure the quality of learning achievement before the BECE at the end of JHS. In turn, this will provide the evidence to allow future interventions in the quality of education delivery to be better targeted. The review of the basic education curriculum will be linked with the revision of the teacher education curriculum for pre-service training to ensure coherence between the two, and

both will be coordinated by the reform secretariat. Furthermore, a policy on repetition will be designed and linked with plans for remedial instruction provision. In future, the secondary curriculum will also be reviewed, to build upon the progress made at the basic level.

Improving the efficiency of basic education delivery is critical in order to guarantee the sustainability of the system and various approaches will be used in Ghana to achieve this. Firstly, the targets for PTRs at KG, primary, and JHS will be raised from their current levels because salary costs form such a significant portion of the costs of basic education. Improved teacher deployment systems will ensure a more responsive deployment system that is able to respond to where teachers are needed and to ensure a better geographical distribution of teachers. This will also ensure that PTRs in individual schools do not rise to levels that negatively impact the quality of education, particularly for example where at JHS level teaching is subject-based rather than class-based and where there is therefore a need to deploy teachers to meet subject-based demands. This will be linked with the new teacher licensing system to support the professionalisation of teachers through the implementation of the PTPDM policy (more detail is given on this in the education management section).

Furthermore, right-age enrolment is also key to improving the internal efficiency of the system. Right-age enrolment at KG will be enforced to avoid the system effectively paying for the day-care of under-age children, and older children will be sent to Primary 1 instead of entering KG aged six or seven. Repetition is a sign of the lack of efficiency in the current system and while it is possible to track repetition rates through the EMIS, these are seriously under-reported. It is not possible for schools to systematically track pupils, as explained further in Chapter 4, and so other KPIs must be relied on to measure the efficiency of the system.

Finally, in a bid to introduce innovation and learn from management practices that could be more widely introduced, Ghana is launching a pilot public–private partnership (PPP) in basic and secondary education. This will be focused on improving the quality of education delivered through contracting out the operation of public schools to not-for-profit organisations and is another pillar of the reform agenda. The PPP is designed to allow operators to address some of the complex and interwoven challenges faced by the mainstream system, such as poor mentoring and accountability of teachers, lack of supervision, and low time-on-task. Non-state providers will be required to meet clearly defined KPIs or be exited from the programme, while schools will remain government owned and government funded.

The focus on quality and efficiency in basic education does not mean that the question of access has already been solved. Targeted interventions are being prioritised in this area to ensure that no child is left out of the education system. Specifically, improving school infrastructure, particularly at the KG level, is critical to providing the appropriate learning environment. Continuing the implementation and, if necessary, expansion of the Complementary Basic Education programme will ensure that no child is left out of education, and that every child has the opportunity to join the mainstream system.

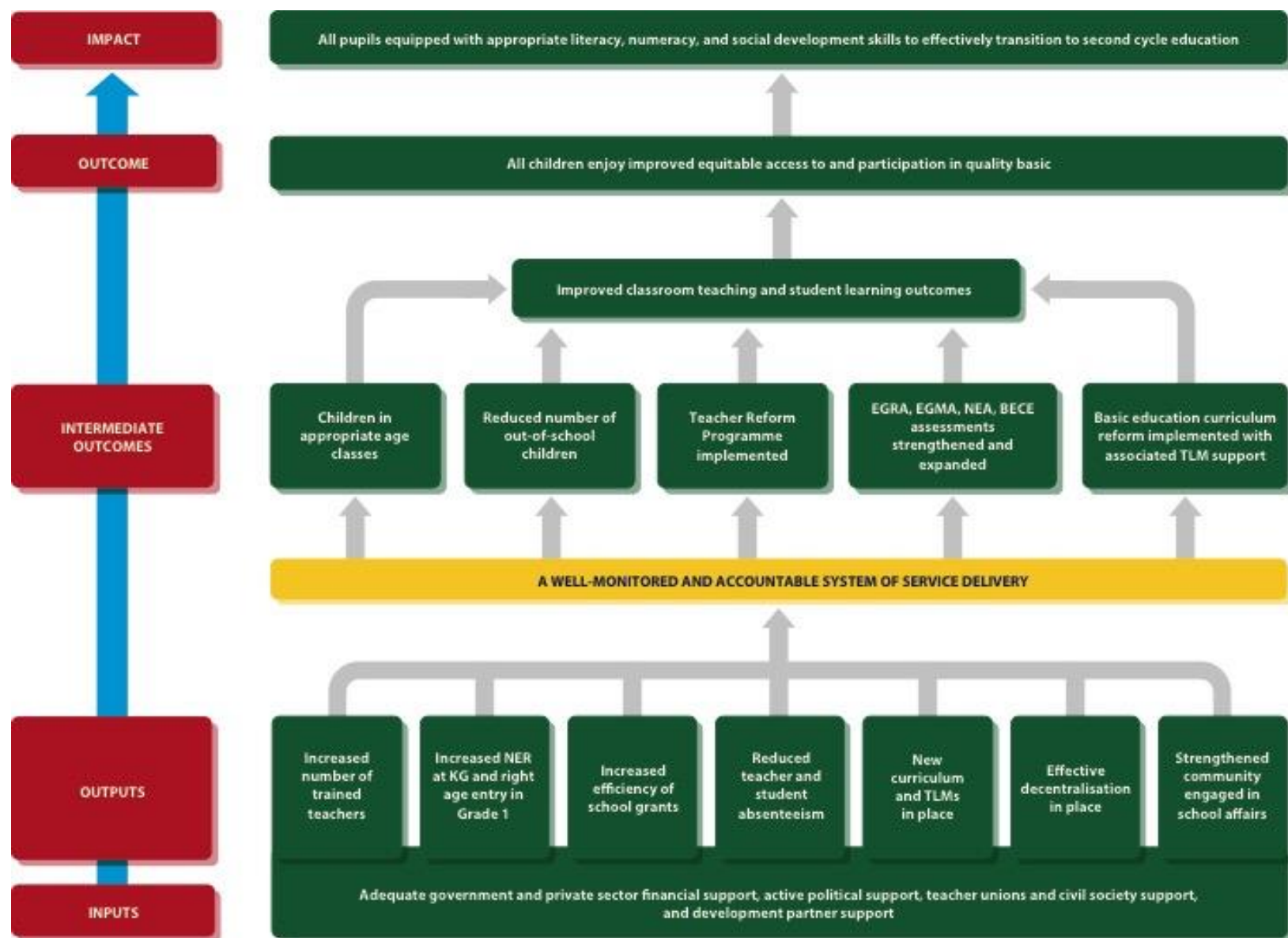
KPIs for basic education (more detail is given in M&E chapter), disaggregated by sex, location, wealth, and disability, when possible, are as follows:

- KG NER;

- primary NER;
- JHS NER;
- net admission rate to primary (NAR);
- primary completion rate;
- JHS completion rate;
- BECE performance⁵: % pupils scoring above 50% in all four core subjects based on raw score;
- proportion of Primary Grade 4 (P4) pupils with proficiency in English in National Education Assessment;
- proportion of P4 pupils with proficiency in mathematics in National Education Assessment;
- Pupil–trained teacher ratio at KG;
- Pupil–trained teacher ratio at primary level; and
- Pupil–trained teacher ratio at JHS.

⁵ BECE scores measured on a Standard Nine, 'Stanine', system cannot be compared between years and so the raw score will be used, unless the basic education assessment framework develops a new measure of JHS performance to replace it

ToC for basic education:



3.1.1 Basic education: from policy objectives to strategies

POLICY OBJECTIVE	MAIN PROBLEMS TO ADDRESS	STRATEGIES
Policy Objective 1: Improved equitable access to and participation in inclusive quality education at all levels		
BE 1.1: Increased enrolment in basic schools, particularly in disadvantaged communities	<ul style="list-style-type: none"> • Under- and over-age enrolment, as shown in the dynamics of the GER and NER at the pre-tertiary level, especially in KG, coupled with stagnation in the proportion of OOSC • Low quality of supply in school infrastructure and other facilities in public basic schools weakens demand • Distance to schools in rural areas negatively impacts right-age enrolment • Poor state of school infrastructure, including water and sanitation facilities at all levels of basic education, particularly in disadvantaged communities (a total of almost 7,000 classrooms and toilets at KG, primary, and JHS levels need renovation/rehabilitation) • Numbers of OOSC not declining and communities in some remote deprived districts still unable to access primary schools within 3–5 km radius • Limited information at the district level regarding the distribution of OOSC • Limited government involvement and leadership in the implementation of CBE to date 	<ul style="list-style-type: none"> • BE 1.1.1: Improve age-appropriate enrolment in public KG, primary schools, and JHS, focusing on reducing under-age enrolment at KG level and encouraging first time over-age enrollees to attend primary schools rather than KG • BE 1.1.2: Improve quality of supply of infrastructure in public KG, primary schools and JHS to stimulate increased demand, particularly in disadvantaged districts, and to respond to changes in population and the distribution of school demand • BE 1.1.3: Improve ease of, and safety of, access for all children, including limiting distance to school in rural areas • BE 1.1.4: Target social intervention programmes, such as those relating to school feeding, school uniforms, and transport, to ensure that children from disadvantaged groups are enrolled and stay in school • BE 1.1.5: Identify opportunities for and implement multi-grade teaching in some basic schools with low enrolment to improve efficient use of resources • BE 1.1.6 Increase provision of CBE as an interim measure to deliver education to hard-to-reach children (OOSC)

BE 1.2: Achieved and sustained gender parity in access to quality basic education, with a focus on reducing regional disparities	<ul style="list-style-type: none"> • Low completion rates of girls in JHS, and specifically in JHS1 and JHS2 • Lower participation of females at JHS level, with Gender Parity Index (GPI) of 0.93 in GER • Wide disparity in GPI of enrolment and completion between districts and regions 	<ul style="list-style-type: none"> • BE 1.2.1: Increase demand for families to enroll and retain girls in school, particularly in JHS • BE 1.2.2: Ensure that gender-friendly guidance and counselling and SHEP policies are in place centrally, and in districts, and are being implemented in schools
Policy Objective 2: Improved quality of teaching and learning and STEM at all levels		
BE 2.1: Increased use of quality TLMs in basic education	<ul style="list-style-type: none"> • Inadequate supply of age-appropriate TLMs • Inadequate procedures and policies for the development, procurement, and distribution of TLMs, especially textbooks 	<ul style="list-style-type: none"> • BE 2.1.1: Use effective strategies to ensure that all KG and primary school children develop early grade reading and maths foundational skills in KG through to Primary Grade 3 (P3) • BE 2.1.2: Develop comprehensive policy frameworks for the development and distribution of TLMs and library facilities
BE 2.2: Improved learning assessment to support learning achievement of basic school pupils	<ul style="list-style-type: none"> • Inadequate comprehensive and annual assessment at certain key points of education • Inadequate comprehensive assessment policy to guide learning outcomes • Inadequate teacher capacity to conduct formative and summative assessments at the classroom level 	<ul style="list-style-type: none"> • BE 2.2.1: Use effective strategies to ensure that KG promote school readiness and primary school children develop early grade reading and maths foundational skills in KG through to P3 • BE 2.2.2: Promote the development of assessment systems for tracking both pupils and school performance on a periodic basis • BE 2.2.3: Strengthen the learning assessment agencies under the MOE

<p>BE 2.3: Improved learning environments, including health and sanitation, child protection, and guidance and counselling, in basic schools</p>	<ul style="list-style-type: none"> • Inadequate resource mobilisation at district and school level to support school health facilities • Inadequate screening of basic school children to detect health problems • Ongoing use of corporal punishment and inadequate alternative measures to modify behaviour of children in schools 	<ul style="list-style-type: none"> • BE 2.3.1: Train head teachers, SMCs, and PTAs in local resource mobilisation to increase resources for school-level health and sanitation facilities • BE 2.3.2: Promote public–private partnerships (CBOs, NGOs, FBOs, and DPs) in integrated school health programmes • BE 2.3.3: Enforce policies to ensure all basic schools meet national norms in health, sanitation, and safety, including national initiatives to reduce HIV/AIDs and sexually transmitted diseases • BE 2.3.4: Improve training for teachers in positive discipline and good classroom management
<p>BE 2.4: Improved quality and relevance of basic education curriculum</p>	<ul style="list-style-type: none"> • Inadequate curriculum to meet needs of students and nation; overloading of curriculum, leading to superficial learning • National language of instruction policy not clear and not effectively implemented • Problem of teaching to the test without acquisition of knowledge and skills • Basic education curriculum has not been reviewed since 2007 (apart from maths, science, English and Ghanaian languages, which were reviewed in 2012) 	<ul style="list-style-type: none"> • BE 2.4.1: Develop and implement a comprehensive standards-based basic school curriculum to improve learning achievement in basic (foundational) skills areas, the 4Rs (Reading, wRiting, aRithmetic, and cReativity) • BE 2.4.2: Improve school-based in-service training led by head teachers, curriculum leads, and circuit supervisors • BE 2.4.3: Use effective strategies to ensure transition from reading in local language to English by P4

BE 2.5: Enhanced instructional practices of basic education teachers and head teachers	<ul style="list-style-type: none"> • Inadequate national standards to guide teachers' practices and leadership of heads • Weak strategies put in place for supporting transition from local languages to English language at P4 • Inadequate reading practices outside of classroom • Weak instructional leadership of head teachers, curriculum leads, circuit supervisors, and district inspectors • Teachers lack the pedagogical skills to manage classrooms, and teach literacy and numeracy, and have no regular CPD or mentoring; most teachers at KG do not have KG-specific training 	<ul style="list-style-type: none"> • BE 2.5.1: Improve instructional leadership of head teachers, curriculum leads, circuit supervisors, and district officers to support improved practices of teachers • BE 2.5.2: Improve capacity of teachers in schools to apply pedagogical best practice • BE 2.5.3: Identify and implement activities to increase outside-of-classroom reading practice (illustrative activities: reading clubs, libraries, book kiosks) • BE 2.5.4 Pilot a public–private partnership in basic schools to improve the quality of learning outcomes through improved management and instructional leadership, and inform future roll-out
BE 2.6: Improved STEM education, quality, and relevance of teaching and learning at the basic school level	<ul style="list-style-type: none"> • Poor learning outcomes in STEM subjects in basic schools • Poor STEM background of teachers • Gendered pattern in results of STEM subjects at BECE • Poor facilities including ICT and laboratories for STEM education at basic schools 	<ul style="list-style-type: none"> • BE 2.6.1: Provide relevant opportunities for ICT and skills development with well-supplied ICT facilities • BE 2.6.2: Promote science, mathematics, and technical education in basic schools – particularly for girls • BE 2.6.3: Ensure the availability of qualified science and maths teachers in JHS
Policy Objective 3: Sustainable and efficient management, financing, and accountability of education service delivery		
BE 3.1: Improved effectiveness of community-based structures to strengthen their supervisory functions	<ul style="list-style-type: none"> • SMCs in most basic schools are not operational • Ineffectiveness of DEOCs and MEOCs 	<ul style="list-style-type: none"> • BE 3.1.1: Train MEOCs, DEOCs, and SMCs to participate in accountability framework implementation, to monitor the delivery of quality education resources, and to assess learning achievement in their zones of authority • BE 3.1.2: Empower PTAs to demand social accountability – especially in disadvantaged communities

BE 3.2: Strengthened financial management, coordination, and accountability in basic education	<ul style="list-style-type: none"> • Inadequate comprehensive accountability framework • Inadequate training, particularly for head teachers, in financial management of grants provided to basic schools • Weak coordination and communication among education sector partners 	<ul style="list-style-type: none"> • BE 3.2.1: Strengthen school management capacity to effectively utilise capitation grants and other subsidies for school improvement • BE 3.2.2: Design, cost out, budget for, and implement an accountability framework for basic education as part of the wider sector accountability framework
BE 3.3: Improved planning, monitoring, evaluation, and reporting systems	<ul style="list-style-type: none"> • Ineffective mechanisms for programme management, institutional strengthening, and M&E of project activities • Ineffective planning, monitoring, and supervisory practices by district directors 	<ul style="list-style-type: none"> • BE 3.3.1: Strengthen evidence-based planning at district and national level

3.2 Secondary education – Improved equitable access to and participation in quality SHS education

SHS development is key to creating a well-educated workforce that is ready to contribute to Ghana's development and to harness the growing youth population, in light of the demographic transition the country is currently experiencing. In particular, expanding equitable access to quality SHS is crucial for sustaining and strengthening Ghana's position as a middle-income country, and therefore for reducing poverty levels.

Whilst GERs and NERs for SHS have improved substantially in recent years, the sub-sector still faces challenges, with the GER only reaching 50% in 2016/17, transition rates from JHS to SHS being only 68%, high levels of repetition, and with many over-age students enrolled in SHS. Inequities in the system, which start to become visible at JHS, become further entrenched at SHS. Whilst gender parity has nearly been achieved (0.96 in 2016/17), there are substantial inequities to access across wealth quintiles: those coming from the poorest 20% of households, the most deprived districts, and/or from rural areas, are about five to six times less likely to access SHS.

Inequity is also reflected in learning outcomes – with the three northern regions performing the most poorly in the WASSCE. Gender disparities in performance, to the detriment of girls, exist across all regions for maths, science, and social studies, and, in the three northern regions, for English as well. At the school level, there are large variations in performance: in some schools, nearly 100% of students achieve grades of A1 to C6 in WASSCE, and in many others 0% do so.

Ghana's SHS system has some excellent SHS that are highly selective and in recent years almost 99% of those who have attended private JHS are placed in these elite public SHS. This trend has perpetuated the inequities in the system, with only a small number of SHS supplying over 90% of those who are admitted to higher education. Whilst 90% of teachers in SHS are trained, this does not seem to be translating into good-quality learning outcomes. The situation is exacerbated by low textbook–student ratios, which have declined substantially in recent years – for example, reaching 0.5 in 2016/17 for maths.

The introduction of free SHS in September 2017 is a significant reform which is expected to address the access and equity challenges in the sector, in particular by addressing the costs of SHS, which have been identified as a key barrier to attendance. In addition, the free SHS policy has made progress in opening up access to elite SHS schools by ensuring that 30% of seats in SHS are reserved for those from public JHS. In recent years, there have also been efforts to expand school infrastructure to accommodate growing enrolment in SHS, including through the Secondary Education Improvement Project (SEIP). 124 new SHS schools are planned, with 44 already completed. However, with expected increased enrolment through free SHS and increasing student–classroom ratios, which reached 48 in 2016/17, despite the much lower PTR of 20 in 2014/15, a focus on understanding and meeting infrastructure requirements will remain. Free SHS is not limited to expanding access and the fees absorbed by government also include levies which can be put back into schools for quality interventions, such as school-based in-service training. Furthermore, the school feeding for day students instituted under the free SHS programme will enhance quality by improving the learning environment for students and the commitment to quality is underlined by the increased provision of textbooks to ensure sufficient TLMs for the increased enrolment. The SEIP has also introduced interventions to improve quality in SHS, such as leadership and management training and School Performance Partnership Plans (SPPPs), which have subsequently been rolled out to over 80% of all public SHS in the country. As part of the MOE's plans to integrate the use of ICT in teaching, the SEIP has also supported the development and roll-out of the i-box, a repository of learning resources for SHS core subjects that can be wirelessly accessed on the school campus.

The ToC for SHS depends on the implementation of free SHS in a manner that adequately addresses equity concerns in terms of location, gender, and wealth quintile, both in access and learning outcomes. In turn, this will improve the trajectory and opportunities post-SHS for the most marginalised. Key to the achievement of the ToC is addressing the quality of education in SHS – ensuring improved teaching and learning, relevant TLMs (including use of ICT), and strengthening the implementation of STEM. Underpinning this will be strengthened school management and leadership at SHS level. Achievement of the ToC is based on the assumptions that the system will have the necessary resources and capacity to implement the planned reforms. In addition, it is assumed that the planned expansion of SHS will be implemented in a way that reduces inequities, especially disparities relating to gender, wealth, and disabilities. Furthermore, the free SHS policy, including its focus on student performance, will be carefully monitored and adjusted, to ensure it does not exacerbate inequality at this level.

Strategies included in the ESP will involve a strong focus on increasing equitable access, improving learning outcomes through relevant curricula and improved teaching and resources, and strengthening school management and leadership. Training of heads in effective school management and proposed performance contracts for heads of SHS should increase accountability at SHS levels. Ensuring adequate and timely disbursement of resources will also support improved management and accountability – disbursements for the free SHS policy were rolled out in a timely fashion for the first term of the 2017/18 academic year, which has allowed for adequate planning and implementation.

A new integrated curriculum reform should see a greater focus on learning outcomes as teachers will be trained in the delivery of specific curriculum objectives. The new curricula will be supported by ICT-linked strategies and will include a stronger promotion of STEM (and increased provision of relevant science equipment), with the aim of achieving the 60/40 enrolment target for science/arts and humanities at tertiary level (which currently stands at 40/60). This links to the increased focus on STEM at the basic level, as the increased uptake of STEM at SHS is contingent upon success there. Investment in strategies to improve quality (teachers, classrooms, TLMS) will be a priority to ensure that increased funding to SHS by GoG translates into learning outcomes and does not exacerbate current inequities. The ongoing SEIP provides an example of targeting quality enhancements to under-performing schools to improve equity.

Efficiency in SHS and improving equity will be a key priority for the ESP. In the short term, SHS will introduce remedial strategies to support those in need to graduate from SHS 3 within three years, as well as interventions targeted at under-served districts and communities, building on the work of the SEIP. In addition, free SHS has introduced a unique student ID, allowing the MOE to track students from their BECE exams through SHS enrolment and to WASSCE for the first time in Ghana. This creates huge potential to track equity based on JHS origin, as well as to obtain accurate repetition rates, as the system is developed. It is important to note that right-age entry to SHS is a medium-/long-term goal as the problem has its origins at the KG level. In addition, enabling those who are most marginalised to enter SHS rests on them being able to survive through the education system to SHS. These issues will be addressed through the basic education response.

A research agenda at the secondary level is in place that will continue to produce pertinent research, especially on equity and quality outcomes. Efforts to improve quality at SHS will be based on using research and evidence to inform decision-making, including the results of a pilot public–private partnership at SHS. In addition, careful monitoring of the free SHS policy, including targeting of under-performing schools and districts, will be key to building a more equitable system.

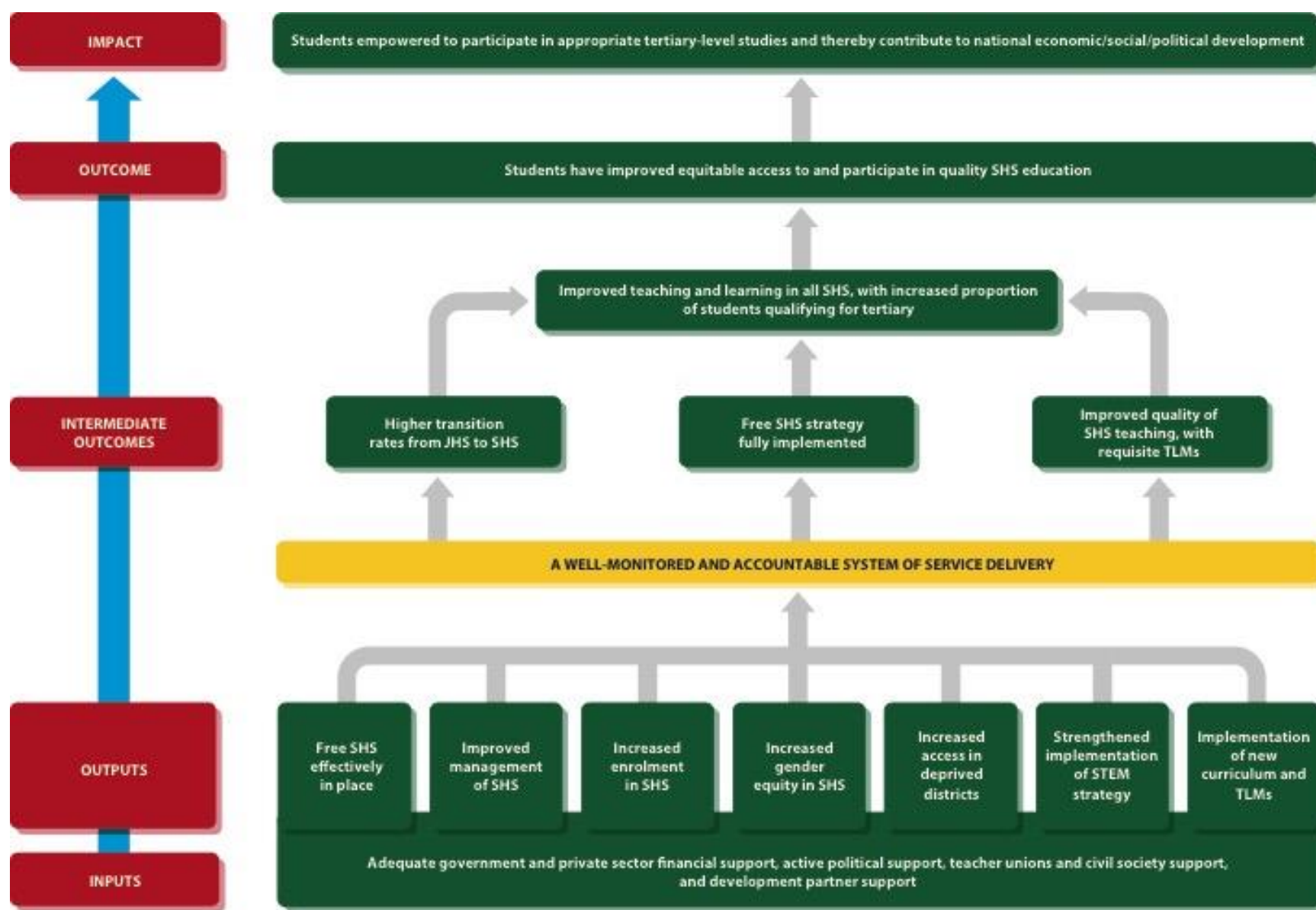
KPIs for SHS (disaggregated by sex, location, wealth and disability, when possible) are as follows:

- SHS GER;

- transition rate from JHS3 to SHS1;
- SHS retention rate⁶;
- % of Computerised School Selection and Placement System (CSSPS) Category 3 schools admitting at least 30% of students from public JHS;
- proportion of WASSCE candidates achieving pass in core subjects (A1 to C6) (English, core maths, integrated science, and social studies).

⁶ This is defined as the proportion of a cohort starting SHS who stay on and complete SHS.

ToC for SHS



3.2.1 Senior secondary education: from policy objectives to strategies

SUB-POLICY OBJECTIVE	MAIN PROBLEMS TO ADDRESS	STRATEGIES
Policy Objective 1: Improved equitable access to and participation in inclusive quality education at all levels		
SE 1.1: Policy to ensure public SHS are free for all Ghanaian children is implemented	<ul style="list-style-type: none"> Cost is a barrier to attending SHS: nationally, 26% of JHS students who are placed in SHS do not attend (compared to 11% when offered full SHS scholarships) GER reached only 50% in 2016/17 JHS₃ to SHS₁ transition is low, at 68% Policy to ensure public SHS are free to all Ghanaian children will put pressure on existing facilities, teachers, classrooms, TLMs, etc. Inadequate information on entry requirements and course offerings for SHS 	<ul style="list-style-type: none"> SE 1.1.1: Renovate, expand, and appropriately equip SHS to accommodate increasing demand SE 1.1.2: Implement a promotion strategy to encourage students to attend free public SHS and select appropriate SHS to attend
SE 1.2: Improved access for disadvantaged groups	<ul style="list-style-type: none"> More resources required to ensure that gender parity at SHS is reached: in 2016/17, gender parity was 0.96 Children with special needs are underrepresented in SHS: they make up 1.8% of the population of school-going age but only account for 0.2% of enrolment in SHS Large inequities in accessing SHS, with those in the three northern regions and the lowest income quintiles much less likely to attend SHS 	<ul style="list-style-type: none"> SE 1.2.1: Ensure the provision of a gender-friendly environment, guidance, and counselling in all schools, and especially where there are large disparities in gender parity SE 1.2.2: Remove all barriers to SHS education for special needs/disabled students SE 1.2.3: Encourage access for those from low-income backgrounds and deprived districts

Policy Objective 2: Improved quality of teaching and learning and STEM at all levels		
SE 2.1: Increased use of quality TLMs and equipment in SHS	<ul style="list-style-type: none"> Target for textbook–student ratio has not been achieved and has been declining: student–textbook ratio is about 0.50 for mathematics, science, and English textbooks Large degree of regional variation in provision of textbooks Delay in producing textbooks when a new curriculum has been approved Poor internet connection facilities in SHS Inadequacy of computers and inadequate integration of ICT in teaching and learning at SHS Introduction of free SHS will constrain existing resources 	<ul style="list-style-type: none"> SE 2.1.1: Invest in TLMs and equipment in SHS SE 2.1.2: Introduce in-school remedial tuition/support, particularly for SHS₁, to improve learning outcomes and reduce repetition
SE 2.2: Improved learning outcomes for girls in all subjects, and for all students in STEM subjects	<ul style="list-style-type: none"> Much lower enrolment in elective science and maths subjects compared to other courses WASSCE pass rates for science and mathematics are low: 49% and 34%, respectively, in 2016/17 Large disparities in learning outcomes in the three northern regions compared to the rest of the country WASSCE pass rates are substantially lower for girls in maths, integrated science, and social studies, and only 20% of girls qualify for tertiary, compared to 26% of boys Inadequate qualified teachers in STEM subjects 	<ul style="list-style-type: none"> SE 2.2.1: Invest in STEM materials and facilities to ensure SHS graduates are adequately prepared for tertiary institutions and the world of work SE 2.2.2: Invest in improving learning outcomes for girls in all subjects, especially STEM
SE 2.3: Improved quality and relevance of SHS curriculum and enhanced delivery of curriculum and assessment framework	<ul style="list-style-type: none"> Current curriculum has not been reviewed since 2010 to accommodate new pedagogical practices and ways of learning Low teacher time-on-task Proportion of teachers trained in SHS is 90%, but continuous professional development is necessary to ensure quality Early WASSCE examinations in SHS₃ do not allow for full three-year course Public perception that a high proportion of students are completing SHS without being functionally literate is becoming real 	<ul style="list-style-type: none"> SE 2.3.1: Improve quality and relevance of SHS curriculum SE 2.3.2: Enhance instructional practices of SHS teachers SE 2.3.3: Pilot a public–private partnership in SHS to improve quality of learning outcomes through improved management and instructional leadership, and to inform future roll-out SE 2.3.4: Strengthen assessment to inform instructional interventions

Policy Objective 3: Sustainable and efficient management, financing, and accountability of education service delivery		
SE 3.1: Strengthened supervision, management, and accountability in SHS	<ul style="list-style-type: none"> • Head teachers are appointed without any training in school leadership • Poor accountability structures for school heads 	<ul style="list-style-type: none"> • SE 3.1.1: Strengthen supervision and management of teaching and learning in SHS • SE 3.1.2: Strengthen supervisory functions of school governing boards and PTAs • SE 3.1.3: Strengthen financial management and accountability
SE 3.2: Improved research, monitoring, evaluation, and reporting systems	<ul style="list-style-type: none"> • Inadequate reported indicators on M&E at SHS • Inadequate research into SHS quality to determine better policy direction 	<ul style="list-style-type: none"> • SE 3.2.1: Strengthen research and M&E systems

3.3 TVET – Strengthened competency-based skills development in TVET

TVET is one of the levels of education that provides skilled personnel to the economy. Although the economy requires technical and vocational skills, few current workers have them – only 17.6% of employees in the total workforce have secondary school, TVET, or higher education qualifications, and 25% of employees have never been to school. The challenges are exacerbated by a mismatch between the skills supplied by TVET and the labour market demand for skills. An additional challenge is the low industry investment and involvement in this sub-sector.

Efforts to improve access within this sub-sector are constrained by low public perceptions: technical and vocational education is usually thought of as an option for under-performing students and many who are placed in these institutions often do not end up attending. This is further compounded by the poor state of training facilities and equipment, and a low absorption capacity for existing TVET institutions: only 5–7% of JHS graduates can be admitted into public and private TVET schools. The participation of women and PWD in this sub-sector is particularly low, especially in traditionally male-dominated areas such as engineering and construction: 26% female enrolment was registered for 2015/16 and in Senior High Technical Schools, this percentage was just 11% in 2016/17.

In addition, only 52% of TVET institute teaching staff possess technical qualifications. Staffing norms and standards vary substantially throughout the country and there are also serious problems with the management of TVET institutions, resulting in high rates of teacher absenteeism and low morale. Consequently, learning outcomes in this sub-sector are poor, especially for students at the Technician level, with only 30% of students on average passing the Technician I examinations. This sub-sector receives less than 3% of the overall education expenditure, although approximately 2% of this is funding raised through IGF from fees and production services.

Access to TVET institutions has steadily increased, both in Senior High Technical Schools and TVET institutions, with between 40,000 to 60,000 students studying each year. However, despite these increases, in 2016/17 there were only 120 public TVET institutions and there has been a recent decline in the number of private institutions. The current provision of TVET is poorly coordinated and fragmented as it is administered across more than 15 ministries. The introduction of GoG's new TVET policy will bring all TVET providers under the MOE, which will result in greater coordination between providers and allow for a more streamlined National TVET Qualifications Framework under the Council for TVET (COTVET).

The TVET ToC is based on improving coordination of TVET institutions under the MOE, improving access in under-served communities, and improving quality by enhancing the relevance of the curriculum and TVET offer, along with the training of TVET teachers. Through increasing the budget allocation and increasing public–private partnerships the expectation is that TVET will become a more attractive pathway for students and will provide relevant skills for the current and future workforce needs. However, improvement in TVET delivery is based on the assumptions that GoG/the MOE will make the necessary financial investment in TVET, and will develop courses that are more responsive to the needs of the economy, which will require ongoing labour market studies. Furthermore, the low public perception of TVET will be addressed with demand-side issues in TVET through developing courses with high demand and with flexible modes of delivery, such as short-term, part-time, and modular courses.

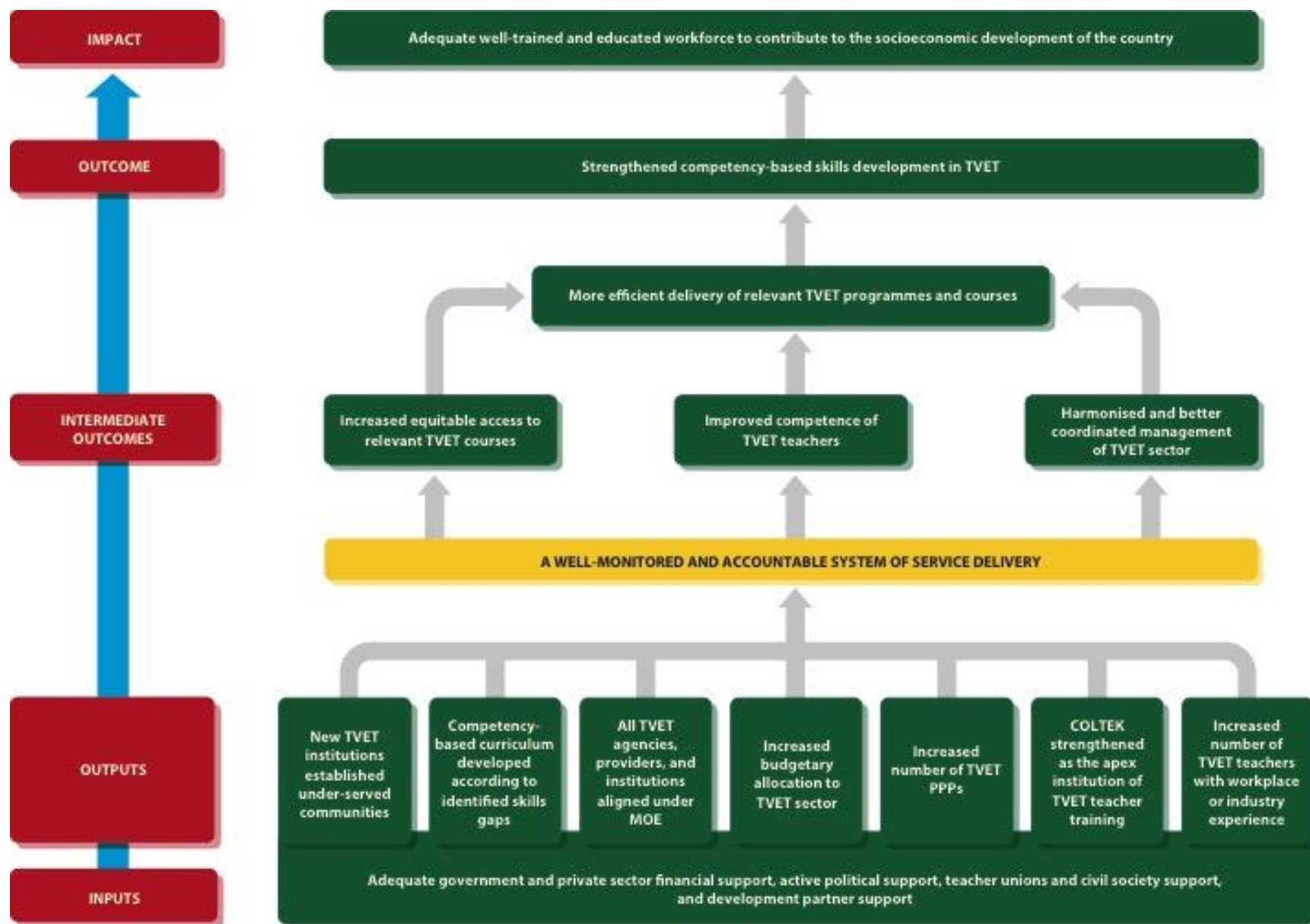
The ESP response to existing challenges is therefore to implement the new TVET policy and ensure improved coordination of provision, increase access, and improve relevance under the umbrella of the realignment of the TVET sub-sector, which is a key pillar of the reform agenda. All TVET programmes and institutions will be brought under the MOE, to improve coordination, coherence, monitoring, and quality of the offer provided. These institutions, along with their budgets, will fall under the oversight of the MOE and improving data collection and collation from TVET institutions will be an important part of mapping the success of the realignment. The new TVET curriculum will be developed in close cooperation with the industrial, commercial, and business sectors. In line with curriculum reform in other sub-sectors, the new TVET curriculum will be competency based. The competencies will be based on identified skills' gaps, and will be decided on in collaboration with the private sector.

Through the reorganisation of teacher education under the associated reform programme, the College of Technology Education, Kumasi (COLTEK) will be provided with the mandate and capacity (human and financial) to become the apex institution for TVET teacher training. In addition, heads of TVET institutions will be granted the necessary authority to make them accountable for student performance. Individual institutions will be given the authority to develop part-time courses and local skills development courses, in order to increase the image of TVET and make it more demand driven. Efforts will be made to develop the framework for TVET public–private partnerships, bringing the world of study and work into a more productive relationship. This development will be enhanced by the policy of increasing the number of TVET teachers who have workplace or industrial experience.

Achievement of the expected outcomes of the TVET education sub-sector will be measured by the following KPIs (disaggregated by sex, location, wealth, and disability, when possible):

- enrolment in MOE/GES TVIs;
- % of BECE (JHS) candidates selecting TVIs for further education and training;
- % MOE/GES TVIs with smart classrooms, workshops, functional laboratories, and libraries;
- % female enrolment in MOE/GES TVIs; and
- % of TVI leavers who are in productive employment two years after graduation.

ToC for TVET



3.3.1 TVET: from policy objectives to strategies

SUB-POLICY OBJECTIVE	MAIN PROBLEMS TO ADDRESS	STRATEGIES
Policy Objective 1: Improved equitable access to and participation in inclusive quality education at all levels		
TVET 1.1: Expanded and upgraded teaching, learning, and training infrastructure to increase access	<ul style="list-style-type: none"> • Inadequate number of good-performing TVET institutions • Inadequate learning and training facilities • Outdated curriculum • Over-dependence on limited public resources for quality TVET provision 	<ul style="list-style-type: none"> • TVET 1.1.1: Establish new TVET centres and upgrade existing facilities
TVET 1.2: Increased enrolment of all categories of learners, including females, PWDs and disadvantaged groups	<ul style="list-style-type: none"> • Declining enrolments and low participation of females (25%) and PWDs in TVET • Only 18% of females are enrolled in male-dominated occupational areas • Inadequate infrastructural facilities and with access for PWDs 	<ul style="list-style-type: none"> • TVET 1.2.1: Introduce demand-driven programmes that are offered in mixed modes to respond to the needs of part-time and full-time learners • TVET 1.2.2: Increase enrolment of females and learners with special needs and disabilities

TVET 1.3: Improved public perception and attractiveness of TVET through rebranding and popularisation	<ul style="list-style-type: none"> • Low social demand for TVET; <7% of JHS graduates opt for TVET at the second cycle level • Persistent notion and perception that TVET is for academically weak students • Inadequate knowledge of the importance and role of TVET in socioeconomic development • Low public awareness of the employment opportunities that TVET offers for the youth • Inadequate career guidance and counselling for learners at the lower levels of the education system • Inadequate recognition of the NTVETQF as a pathway to decent employment and academic progression 	<ul style="list-style-type: none"> • TVET 1.3.1: Design and deploy strong advocacy and communication tools to actively promote the importance of TVET in national socioeconomic development
Policy Objective 2: Improved quality of teaching and learning and STEM at all levels		
TVET 2.1: Improved quality of TVET provision	<ul style="list-style-type: none"> • Inadequate teacher quality: teachers lack professional and workplace experience • Inadequate workplace experiential learning and internships for students • Limited technology-mediated learning and use of ICT in TVET provision • Obsolete training equipment and facilities • Restrictive progression pathways to higher-level TVET for pre-tertiary TVET learners 	<ul style="list-style-type: none"> • TVET 2.1.1: Strengthen the pedagogical and professional/industry-related skills of TVET teachers • TVET 2.1.2: Improve workplace experiential learning progression of learners to higher-level TVET
TVET 2.2: Improved relevance of the TVET curriculum to labour market demands and emerging economic sectors	<ul style="list-style-type: none"> • Mismatch between skills in demand by industry and those supplied by training institutions • Misalignment of training with industry occupational standards • Inadequate number of STEM-based programmes • Limited knowledge of green concepts and technologies and green jobs in TVET provision 	<ul style="list-style-type: none"> • TVET 2.2.1: Develop and deliver curriculum based on identified skills gaps and occupational standards • TVET 2.2.2: Integrate green technologies into TVET provision and prepare learners for green jobs • TVET 2.2.3: Strengthen STEM-based programmes, the learning of entrepreneurial skills, and CBT methodology in TVET provision to enhance employability
Policy Objective 3: Sustainable and efficient management, financing, and accountability of education service delivery		

TVET 3.1: A strong legal, governance, and regulatory framework for greater coherence and accountability of the TVET system	<ul style="list-style-type: none"> • Poor coordination among multiple TVET delivery agencies • Multiplicity of standards, testing, and certification regimes • Inadequate regulatory and quality assurance mechanisms • Absence of comprehensive and reliable data and statistics on TVET • Very little TVET research to support policy planning and decision-making 	<ul style="list-style-type: none"> • TVET 3.1.1: Establish new TVET governance structure and regulatory framework that is embedded within national development plans • TVET 3.1.2: Involve sector skills councils in the development and quality assurance of TVET programmes and assessment of learners • TVET 3.1.3: Strengthen TVET research and TVET management information system and integrate with EMIS database
TVET 3.2: Adequate and sustainable financing of TVET delivery	<ul style="list-style-type: none"> • Inadequate public funding of TVET (approximately 3% of education sector budget) • Low private sector/industry investment and involvement in financing of TVET 	<ul style="list-style-type: none"> • TVET 3.2.1: Seek increase in budgetary allocation to TVET and explore alternative funding sources

3.4 NFE – Improved opportunities for non-literate youth and adults to have free access to meaningful quality education and training

NFE should provide opportunities for non-literate youth and adults to be able to access quality education and training to enable them to attain basic skills. NFED is the primary agency responsible for the provision of NFE, especially functional literacy and community education programmes. There has been progress in Ghana in reducing illiteracy in recent years – for example, only 35% of those over 65 years old are literate, compared to 86% of 15 to 24 year olds. However, there are still more than 1.2 million illiterate adults in Ghana, mostly concentrated in the three northern regions and within the lowest income quintiles. In addition, by the end of basic education, only 54% of males and 43% of females aged 15–44 have acquired literacy skills that are likely to persist through adulthood.

The main intervention that the MOE employs to improve literacy rates for the non-formal economy is the National Functional Literacy Programme (NFLP). The latest programme enrolled over 17,000 learners. This programme offers a second chance to learners who have been unable to benefit from the formal system for whatever reason. Approximately 1,200 National Service Persons (NSPs) have been recruited to serve as facilitators of the programme. However, there has been little training for them to become effective facilitators. While other initiatives have also been employed, such as delivering literacy programmes on the radio, these are severely underfunded and progress has slowed substantially. Attempts to develop a literacy phone application also suffer from a lack of funding. Funding gaps for NFED affect quality measures in terms of training for facilitators, TLMS, curriculum review, supervision, and even the printing of materials. There has also been limited scope for NFED to offer initiatives related to skills development.

NFE received the least of government education expenditures in 2015, which is almost entirely recurrent and demonstrates a low commitment to NFE programmes. Efforts of NFED in providing literacy programmes are hamstrung by the fact that it does not possess agency status, and thus does not benefit from the clarification and ability to implement its mandate associated with such a status. In addition, adult literacy is a cross-cutting issue, which affects various ministries and sectors; however, at present there is no national policy on NFE and adult learning, which mitigates effective implementation and oversight, and leaves this sub-sector fragmented.

The ToC outlines the expectation that by increasing adult literacy programmes in targeted populations (female, rural, lower wealth quintiles, and northern regions) and making more relevant NFE programmes available should increase the appeal of NFE and improve access as well as equity in literacy attainment. By addressing institutional and budget challenges, as well as exploring linkages across sectors and with the private sector, NFED should be able to fulfil its mandate. This will assist in ensuring the improved quality of programmes, with trained facilitators with appropriate materials available, as well as improved M&E of NFE programmes. The achievement of the expected outcome of the ToC is based on the MOE carrying out the planned institutional reform of NFED, as well as the assumptions of an improved understanding

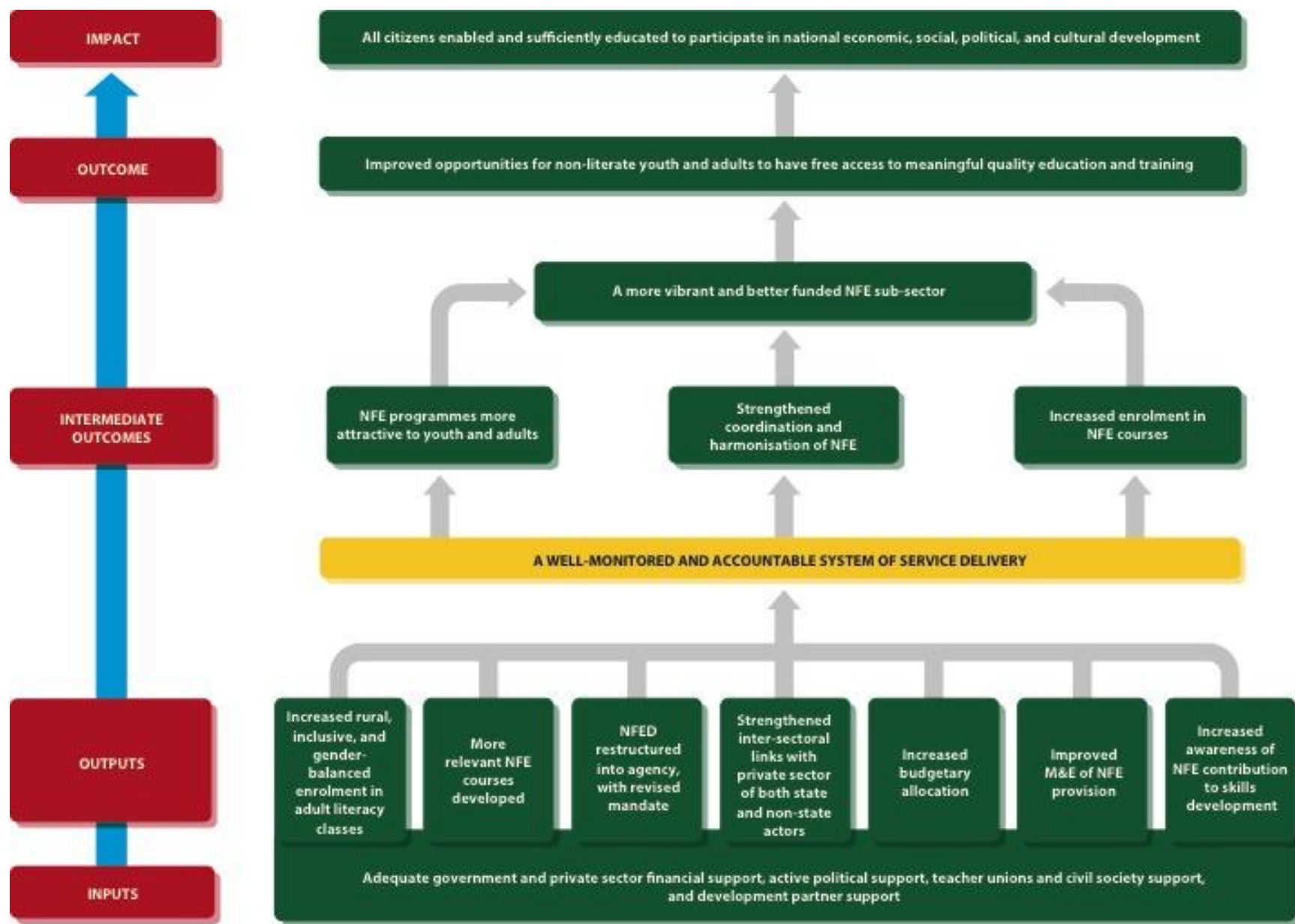
and response to the diverse NFE needs of the population and that resources are available to enable the NFED to fulfil its mandate.

The policies and strategies proposed below for NFE are key to achieving the goal of the NFE sub-sector. Within them are priorities to ensure improved outcomes from NFE programmes, improved equity in literacy and skills access and attainment, as well as improved accountability for investments in line with the lens for prioritisation for investment of resources for this ESP. The priorities are reforming NFED to enable it to have a clearer mandate and access to funding, and carrying out a National Literacy Competency Survey to provide much-needed evidence of client needs. This will provide the necessary information to design more client-oriented curricula and programmes, and will make it possible to offer programmes in those areas with least access and highest need. Failing to address the quality and relevance of NFE programmes could lead to inefficient investments of resources.

Achievement of the expected outcomes of the NFE sub-sector will be measured by the following KPIs (disaggregated by sex, location, wealth, and disability, when possible):

- enrolment in face-to-face adult literacy programmes;
- enrolment in newly created NFE programmes;
- number of new NFE programmes developed with textbook/content material (aggregate from baseline);
- number of new learning centres built; and
- proportion of non-formal graduates who access skills development opportunities.

ToC for NFE



3.4.1 NFE: from policy objectives to strategies

SUB-POLICY OBJECTIVE	MAIN PROBLEMS TO ADDRESS	STRATEGIES
Policy Objective 1: Improved equitable access to and participation in inclusive quality education at all levels		
NFE 1.1: Increased enrolment in NFE programmes	<ul style="list-style-type: none"> • Current resources are inadequate to support the adult literacy need in Ghana • National Functional Literacy Programme is not adequate to address all groups with literacy needs in Ghana • Low enrolment in NFE programmes, as evidenced by the non-participation by the target group in NFE programmes • Large geographical disparities in literacy rates among 15–24-year-olds: less than 70% of 15–24-year-olds in the three northern regions were literate in 2014, compared to over 90% in Greater Accra 	<ul style="list-style-type: none"> • NFE 1.1.1: Improve access to existing National Functional Literacy Programme and future NFE programmes, particularly through improvements in infrastructure • NFE 1.1.2: Develop additional NFE literacy programmes to include more learners • NFE 1.1.3 Increase enrolment of learners with special needs, disabilities, women, and disadvantaged groups
NFE 1.2: Increased awareness of NFE programmes	<ul style="list-style-type: none"> • Low awareness of NFE programmes • Low image and public perception of NFE at all levels 	<ul style="list-style-type: none"> • NFE 1.2.1: Actively promote and rebrand NFE through enhanced advocacy and strong communication
Policy Objective 2: Improved quality of teaching and learning and STEM at all levels		
NFE 2.1: Improved quality of programme delivery, including curriculum, TLMs, assessment, and progression	<ul style="list-style-type: none"> • NFE facilities lack TLMs to ensure effective teaching • Lack of progression from basic literacy programmes to higher skills • Lack of assessment structure for learners to earn certification • Curriculum has not been reviewed in several years 	<ul style="list-style-type: none"> • NFE 2.1.1: Ensure provision of TLMs in all NFE programmes • NFE 2.1.2 Strengthen curriculum relevance and delivery • NFE 2.1.3 Strengthen assessment in NFE programmes and strengthen progression possibilities from NFE programmes

Policy Objective 3: Sustainable and efficient management, financing, and accountability of education service delivery		
NFE 3.1: Coherent legal and institutional framework that allows NFE to respond to non-formal demands provided	<ul style="list-style-type: none"> • Absence of clear articulation of the role and target population of NFE programmes • Absence of a national policy on NFE and adult learning mitigates effective implementation of activities. NFE cuts across ministries and sectors, but there is no national policy to coordinate efforts • Inadequate political will for NFE programmes, resulting in inadequate support and funding 	<ul style="list-style-type: none"> • NFE 3.1.1: Strengthen NFE delivery through clearly defined policy • NFE 3.1.2: Restructure NFED into an agency, with a renewed mandate
NFE 3.2: Adequate and sustainable financing and allocation of resources to all NFE operations	<ul style="list-style-type: none"> • NFE inadequately financed to support existing programmes or expand into new areas • Poor coordination with private sector, which could help alleviate financial burden for NFE 	<ul style="list-style-type: none"> • NFE 3.2.1: Lobby MOE for improved and systematic increase of resource allocation to NFE • NFE 3.2.2 Explore additional sources of funding for NFE operations
NFE 3.3: Accountability and quality assurance mechanism of NFE programmes delivery strengthened	<ul style="list-style-type: none"> • Not enough indicators currently being collected to report on NFE • Irregular M&E of NFE programmes 	<ul style="list-style-type: none"> • NFE 3.3.1: Improve supervision, monitoring, and reporting of NFE initiatives • NFE 3.3.2 Design and implement standards for quality delivery of all NFE programme variables
NFE 3.4: Strengthened intersectoral links to ensure lifelong learning opportunities for NFE graduates	<ul style="list-style-type: none"> • Lack of options for non-formal graduates • Poor linkages across sectors to promote lifelong learning 	<ul style="list-style-type: none"> • NFE 3.4.1: Strengthen links across sectors to enable NFE graduates to access skill development opportunities

3.5 Inclusive and special education – Improved access for persons with disability, the vulnerable, and the talented

Inclusive education is concerned with providing education to both children with disabilities who are already in school and those who are out of school. Population census data indicate that although prevalence of disabilities is reported to be 1.6% for the school-age population, enrolment of children with disabilities is low (0.2% to 0.4% of total enrolment) between KG and SHS. Furthermore, this quoted figure for prevalence of disabilities (1.6%) is likely to be underestimated, due to low detection rates. The number of pupils with disabilities in schools is also likely to be underestimated in the EMIS system: for example, only 16% of schools declare having at least one pupil with a disability. One explanation for this could be the late detection of

disabilities or the lack of training for teachers to identify disabilities. Increased collaboration with health services would aid better assessment and identification of children with disabilities. Children with disabilities have lower attendance rates compared to those without disabilities, and are not progressing through the system. The lack of facilities in basic and secondary schools disproportionately affects children with disabilities, with almost no regular basic schools having hand-rails, and only 8% equipped with ramps. Anecdotal evidence suggests that there exists a large degree of stigma/discrimination in relation to children with disabilities.

Currently, the education sector promotes the inclusion of children with disabilities through special schools and inclusion in mainstream schools. The proportion of trained teachers in special schools is higher than in regular schools and PTRs are lower in special schools compared to regular schools, ranging from 7 to 11. However, there are consistent differences. Pupils with disabilities have consistently poorer learning outcomes in reading, writing, and maths than pupils without disabilities. Data collection and reporting for inclusive and special education is limited, leading to an inability to effectively diagnose this sub-sector and a reliance on national-level surveys. However, with the support of UNICEF, in 2017 the MOE carried out a full diagnosis of the education sector in relation to inclusive education and this in-depth analysis will be used to inform improvements in provision moving forward.

This sub-sector is also severely underfunded: in 2015, only 0.6% of total recurrent education expenditure was spent on inclusive and special education, which is concerning given the extra needs of the learners concerned.

The ToC for inclusive and special education focuses on increasing access to education for children with disabilities, through increasing links between special education institutions and mainstream schools; providing appropriate infrastructure; improving detection and support for children with disabilities in regular schools; and creating awareness and building the capacity of service providers to support inclusive education. In order to improve the quality of education for children with disabilities, initial teacher education should promote inclusion, and new and experienced teachers should be trained to effectively teach learners with special educational needs (SEN). Provision of specialised TLMs, including assistive devices, will enable children with disabilities to access learning opportunities and will lead to improved learning outcomes. The ToC is based on the assumptions that the MOE will invest sufficient funds to allow for the necessary physical infrastructure improvements and support to children with disabilities; that the teacher education and curriculum reform programmes will address the needs of inclusive and SEN education; and that management at all levels (from central to school) will receive comprehensive training on disability detection and on advocacy skills.

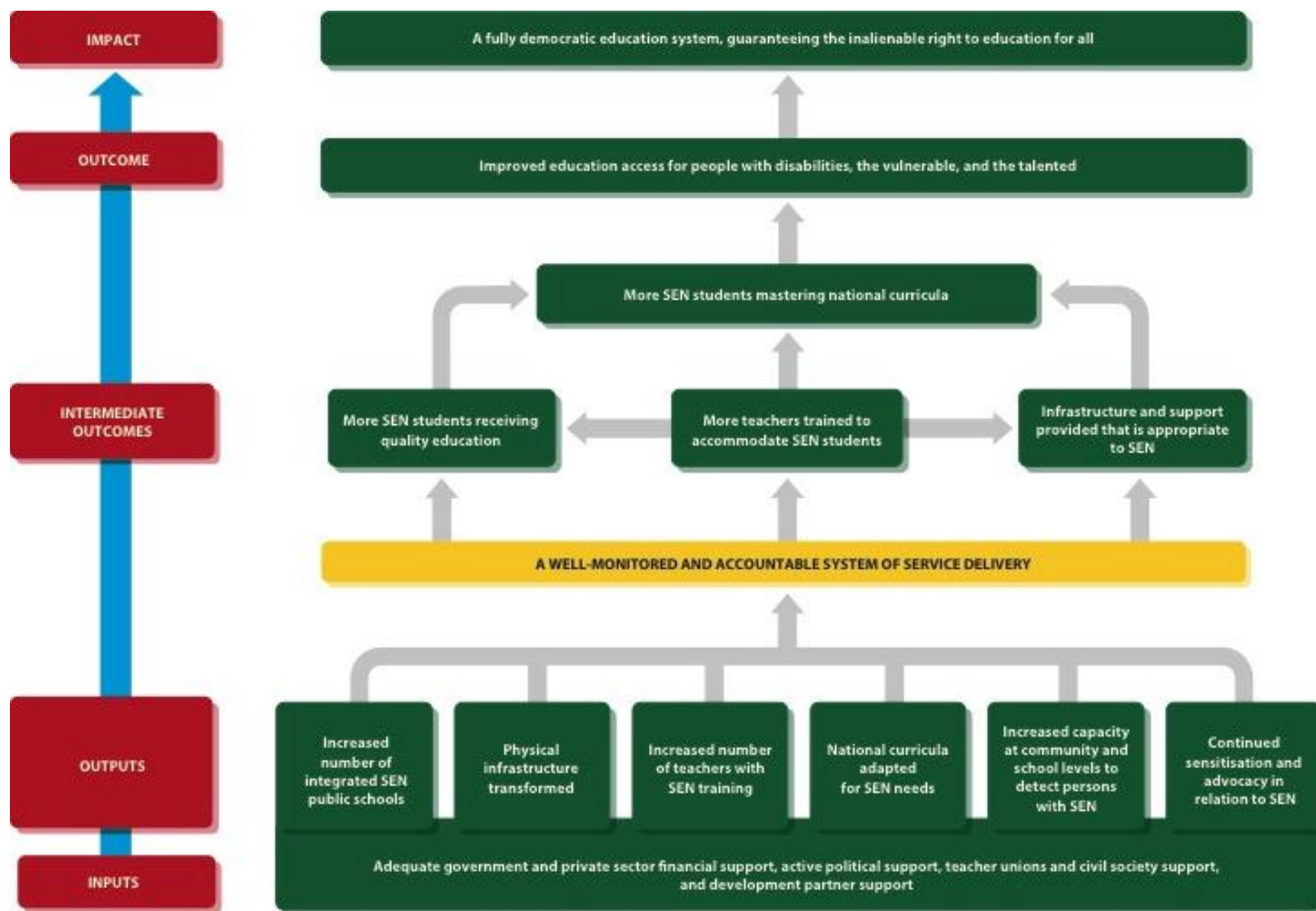
Given the priority of improving access and learning for children with disabilities, this sub-sector response will focus on that area. Priority will be given to improving physical infrastructure and supporting access to schools and learning through the provision of appropriate TLMs, including assistive devices. Reform processes related to curriculum and teacher education will strengthen inclusion in the curriculum and teacher training, as well as specialist training for teaching children with disabilities. Support for children in mainstream schools will be improved by enabling special education institutions to be transformed to serve as resource centres to assist mainstream system access. However, in order to improve community understanding and

support for children with disabilities, including increasing early detection, advocacy and sensitisation in relation to SEN will be increased and linkages with local health authorities strengthened. Coordination with other ministries, such as the Ministry of Health and MoGCSP, is key to ensuring a coordinated and effective approach to the detection and support of students with disabilities. Training and support for school management, head teachers, and teachers on the principles and practices of inclusive and special needs education will be prioritised in order to strengthen awareness and to improve accountability in relation to schools providing education for children with disabilities.

Achievement of the expected outcomes of the inclusive and special education sub-sector will be measured by the following KPIs:

- % enrolment of SEN learners in public integrated basic schools and SHS;
- number of learners with SEN detected annually at different levels of education;
- % of teachers in public basic schools and SHS trained in effectively teaching learners with SEN;
- the status of the mainstreaming of inclusive education;
- % of special schools/regional assessment centres functioning as resource centres for inclusive education; and
- % of integrated basic public schools provided with specialised TLMs for SEN learners.

ToC for inclusive and special education



3.5.1 Inclusive and special education: from policy objectives to strategies

SUB-POLICY OBJECTIVE	MAIN PROBLEMS TO ADDRESS	STRATEGIES
Policy Objective 1: Improved equitable access to and participation in inclusive quality education at all levels		
ISE 1.1: Expanded/transformed school infrastructure to encourage enrolment of learners with SEN	<ul style="list-style-type: none"> Only 32% of special schools have ramps, and 23% have hand-rails Only 44% of regular basic schools have functional water facilities and 43% have no electricity Poor sanitation facilities: 46% of SHS have no hand-washing facility SEN learners make up only 0.2–0.4% of total enrolment in pre-tertiary institutions, despite prevalence rates being 1.7% in the overall population of pre-tertiary learners 	<ul style="list-style-type: none"> ISE 1.1.1: Ensure that the design of the physical infrastructure of existing educational institutions/schools are modified to enhance opportunities for learners with SEN ISE 1.1.2: Transform existing special education institutions to serve as resource centres to assist the mainstream system
ISE 1.2: Safer, more friendly and inclusive environment for learners with SEN created	<ul style="list-style-type: none"> Inadequate community involvement in SEN issues Learners with SEN experience stigma and discrimination 	<ul style="list-style-type: none"> ISE 1.2.1: Promote understanding of learners with SEN in schools and communities through sensitisation and advocacy ISE 1.2.2: Ensure learners with SEN feel protected and safe from harm
ISE 1.3: Strengthened systems for the early detection of learners with SEN	<ul style="list-style-type: none"> Early detection of challenges is an issue due to facilitators' inadequate knowledge as regards identifying needs Minimal or no assessment services are provided to SEN children in mainstream schools Poor collaboration with other ministries (especially Ministry of Health) Lack of early detection has likely underestimated the total population of SEN learners Prevalence rate is increasing by age level and this is unlikely due to higher proportion of SEN learners, and more because early detection is a problem 	<ul style="list-style-type: none"> ISE 1.3.1: Develop capacity of schools and community members to be able to detect learners with SEN early, and ensure infrastructure is in place for this to occur

ISE 1.4: Increased enrolment of vulnerable populations and learners with SEN from excluded groups	<ul style="list-style-type: none"> • Social intervention programmes do not currently cover schools/children with SEN • Few policies in place to address vulnerable groups, such as orphans, street children, dropouts, etc. 	<ul style="list-style-type: none"> • ISE 1.4.1: Ensure social intervention programmes reach schools/children with SEN • ISE 1.4.2: Ensure better collaboration and sensitisation, and better data collection, to include marginalised populations
Policy Objective 2: Improved quality of teaching and learning and STEM at all levels		
ISE 2.1: National curricula content, assessment processes, and benchmarks reviewed, revised, or adapted, and teachers trained to deliver curriculum effectively	<ul style="list-style-type: none"> • National curriculum does not adequately cover strategies and pedagogy for learners with SEN • Teachers do not have the tools to deal with learners with SEN, especially as fewer teachers in mainstream basic schools are trained compared to special schools 	<ul style="list-style-type: none"> • ISE 2.1.1: Review, revise, and adapt curriculum for learners with SEN • ISE 2.1.2: Train existing teachers and attract new teachers to effectively teach learners with SEN
ISE 2.2: Relevant TLMs provided for learners with SEN	<ul style="list-style-type: none"> • Inadequate TLMs in classrooms to address needs of learners with SEN: currently, TLMs are braille textbooks that only address students with visual disabilities 	<ul style="list-style-type: none"> • ISE 2.2.1: Ensure learners with SEN are provided with specialised TLMs to support their needs
ISE 2.3: Educational personnel, administrators, parents, and community oriented and sensitised on inclusion and inclusive practices	<ul style="list-style-type: none"> • Inadequate knowledge of how parents and community can allow children with learning disabilities to reach their potential • Inadequate resources for children with SEN to access the labour market 	<ul style="list-style-type: none"> • ISE 2.3.1: Ensure parents, community, and educational personnel have tools to enhance children's learning abilities • ISE 2.3.2: Train school management, head teachers and teachers on the principles and practices of inclusive and SEN education
Policy Objective 3: Sustainable and efficient management, financing, and accountability of education service delivery		
ISE 3.1: Research, monitoring, and evaluation systems strengthened	<ul style="list-style-type: none"> • Gaps in data collection to fully understand the scale of the SEN issue, both in terms of enrolment statistics and facilities provided by schools • Not enough indicators for special schools currently being collected 	<ul style="list-style-type: none"> • ISE 3.1.1: Review and realign EMIS to reflect inclusive education issues

<p>ISE 3.2: Smooth implementation of inclusive education policy</p>	<ul style="list-style-type: none"> • Inclusive education policy was recently developed: clear processes are required to address roll-out • Inclusive education and SEN are currently siloed and not addressed holistically across Ghana • Inclusive education and SEN are underfunded compared to other sub-sectors: only 0.6% of total recurrent education sector expenditure goes toward inclusive education 	<ul style="list-style-type: none"> • ISE 3.2.1: Ensure administrative and financing structures are in place for inclusive education policy roll-out • ISE 3.2.2: Promote an intersectoral approach to resolving cross-cutting issues
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3.6 Tertiary education – Improved access to world-class tertiary education

The tertiary education sub-sector is expected to produce cadres of highly qualified individuals to support economic and social development in Ghana. The tertiary sub-sector is also responsible for training Ghana's teaching profession. However, the sector faces challenges in terms of limited provision, severe inequities, and low quality. Whilst both the number of tertiary institutions, and enrolment in such institutions, have increased over time, the GER remains low, at about 16% in 2015/16, and total enrolment is approximately 422,000. Private tertiary institutions directly under the MOE make up almost half the total number of total tertiary institutions, but only 19% of enrolment. 27% of institutions are also public COEs. Applications far exceed admissions, especially for public universities, where only 40% of applicants gain admission. Female admissions and applications are much lower compared to males. In 2014/15, 25% of females and 29% of males who applied were admitted to public universities; in 2014/15, 37% of public university applicants were female and the corresponding figure for polytechnics was 35%. There are also wide income and regional disparities in completion at the tertiary level: the parity index for completion rates at the tertiary level between those from the poorest and richest income quintiles is just 0.06. Looking forward, the tertiary sub-sector will face increased demand as a result of free SHS, which will open access to secondary education and give students the opportunity to access tertiary, and so preparations must be made to accommodate this.

Current course offerings across universities are often not sufficiently diversified and concerns have also been raised about the relevance of many of the courses to the demands of the job market; this situation has been partly blamed for the high graduate unemployment in the country. Furthermore, there are often inadequate facilities to accommodate students with disabilities. Financial aid and general affirmative action programmes in the admission of students from low socioeconomic backgrounds and less endowed SHS have been instituted by some institutions but these policies are internal to each tertiary institution and hence are not currently standardised.

In terms of quality, PTRs are much higher than the norms recommended by the NCTE, and less than 40% of teachers have terminal qualifications, a statistic that varies substantially across universities. The targeted ratio of enrolment in science subjects to enrolment in arts subjects is 60:40, but at the moment the ratio is 40:60 and this has remained stagnant for a number of years. Most laboratories and lecture halls are ill-equipped, having less than 50% of the required materials, and institutions have less than 50% of their ICT requirements. In terms of levels of enrolment, in 2015/16, less than 0.5% of enrolment was at PhD level and only 5% was at the master's degree level. Another determinant of quality at the tertiary level is the output of quality research: there are less than 0.5 publications per lecturer per year. Only one Ghanaian university is ranked among the top 25 universities in Africa.

Specific to teacher education, it has been noted that pre-service teacher training is too content-heavy, with low entry requirements and not enough practice in pedagogy. Additionally, all

students follow the same curriculum, regardless of the level at which they are to teach, from KG to JHS, and there is a lack of content knowledge specific to that level.

Given that most tertiary institutions are self-regulated, the NCTE and the NAB have limited capacity and legal authority, which constrains their efforts to serve as supervisory entities. Data for tertiary institutions are usually collected at the end of the academic year, making it difficult to effectively impact decision-making within the year.

In terms of funding, GoG typically provides between 50% and 55% of the total financial resources to the sub-sector, the vast majority of which goes on staff salaries. Internally generated funds are the second largest source of funding for the tertiary sub-sector and GETFund typically provides 8–10% of the sub-sector's funding. However, in spite of these funding sources, there have been substantial gaps: in the 2016 academic year, there was a funding gap of 45%. The Student Loan Trust Fund has been beneficial in increasing access for financially disadvantaged groups; however, it faces funding challenges in financing loans for all students. The establishment of new institutions, upgrading of other institutions to tertiary status, and absorption of private institutions into the public sector by government will put further stress on funding of the tertiary sub-sector.

To address the access and equity challenges in the tertiary sub-sector a number of initiatives are in place but these strategies are specific to each institution and are not currently coordinated or standardised. Some institutions, especially the older public universities, have financial aid and affirmative action programmes for the admission of female students and those from low socioeconomic backgrounds. Although loan amounts to students are inadequate, an increasing number of needy students are accessing the Student Loan Trust Fund (SLTF), which is complemented by financial aid provided by some of the institutions. Additionally, there are strategies to provide students with disabilities with wheelchair access to buildings, braille facilities, and assistive ICT laboratories. Furthermore, many institutions have a 'mature students' entry track for enrolling individuals above the age of 25 years who pass an entry examination, and, finally, there are a number of distance learning programmes on offer. Furthermore, GoG has recently established three universities in regions which hitherto had no public university, to increase access in under-served areas, with an emphasis on STEM subjects. In 2016, Parliament passed the Technical Universities Act to convert eight polytechnics into technical universities, to enhance the public perception of technical education, raise the image of graduates, and provide a clear path of academic progression for them.

In order to strengthen the capacity of universities in Africa to deliver high-quality training and applied research, in 2014 the World Bank and west African governments launched a Centres of Excellence project. Plans are also far advanced to upgrade the COEs into University COEs and to improve the quality of training at these institutions by upgrading the qualification they offer to a bachelor's degree. The Transforming Teacher Education and Learning (T-TEL) programme aims to support improved governance, management, and pedagogical direction in all 46 public COEs. T-TEL supports a college-based tutor professional development programme, with appropriate TLMs, which are also available online.

The ToC for the tertiary sub-sector is based on improving equity and quality in tertiary provision and having a more responsive and relevant tertiary sub-sector. This will include strengthening

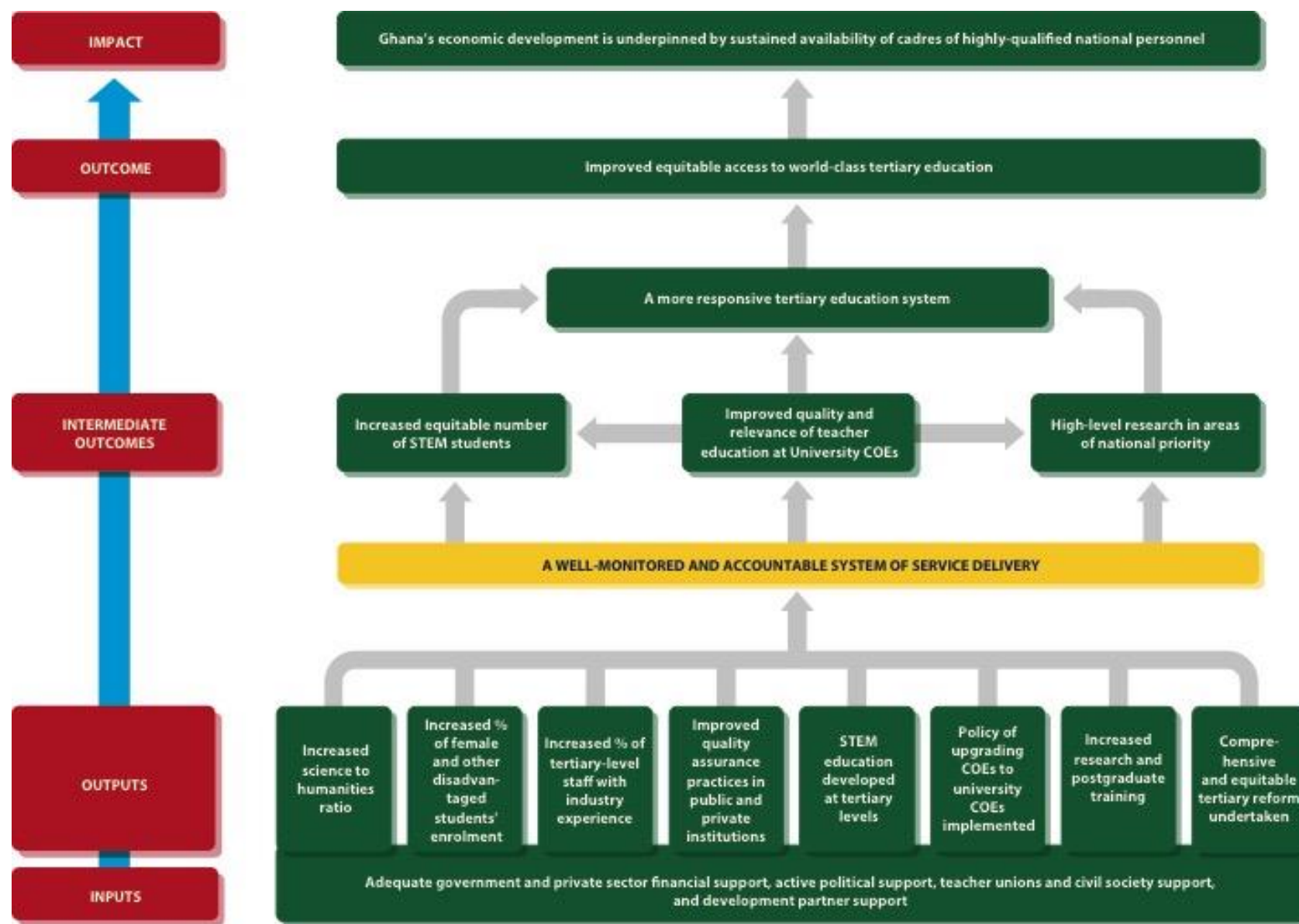
quality assurance in provision across public and private institutions. Improving the skills and experience of tertiary staff and increasing research opportunities and postgraduate training will strengthen the quality outcomes at this level. Strengthening the STEM provision for enrolment on these courses should increase in line with the skills required in Ghana. Upgrading COEs to University COEs and enabling them to offer an updated teacher education curriculum and a degree programme will strengthen the outcomes of the tertiary sub-sector by producing teachers with the relevant skills and knowledge, including classroom-based experience, in order to transform education outcomes in Ghana in the future. The ToC for this sub-sector is based on the assumptions that access to the tertiary sub-sector can expand without further increasing the current inequity level, through such strategies as collaboration with the private sector, increasing enrolments in open and distance learning and the creative use of new technologies, and that GoG/the MOE will put the planned tertiary reforms into practice and report progress regularly to Cabinet.

The ESP strategies for tertiary education build on current initiatives and will focus on improving equity, with affirmative action taken to address gender and wealth inequities and to improve access for students with disabilities. A review of the financing of tertiary education will be implemented to consider how to address the high level of inequity. Enrolment will be expanded through a more creative approach to open and distance learning at tertiary levels. An enhanced STEM offer will be a focus at the tertiary level, with greater support for STEM programmes and by equipping tertiary institutions with modern science laboratories and scientific equipment. Quality will also be enhanced by ensuring teaching staff at all tertiary institutions have specialised training in appropriate pedagogies as well as enabling university staff to gain practical experience in relevant areas of industry. Academic staff will also be supported to carry out research on national priority issues and to increase the number of their publications, through the agency of a National Research Fund. For the teacher training institutions, there will be a focus on implementing the comprehensive roadmap for teacher education reform to improve the initial teacher education offer in Ghana. This is one of the key reform agenda pillars, as is improving the governance of the tertiary sub-sector through clearer mandates.

Achievement of the expected outcomes of the tertiary education sub-sector will be measured by the following KPIs (disaggregated by sex, location, wealth, and disability, when possible):

- tertiary GER;
- enrolment in sciences to enrolment in humanities ratio, including TVET;
- female enrolment as a percentage of total enrolment (%);
- number of publications per academic staff per annum; and
- % of newly qualified teachers meeting National Teaching Standards (NTS) for licensing.

ToC for tertiary education



3.6.1 Tertiary education: from policy objectives to strategies

SUB-POLICY OBJECTIVE	MAIN PROBLEMS TO ADDRESS	STRATEGIES
Policy Objective 1: Improved equitable access to and participation in inclusive quality education at all levels		
TE 1.1: Increased numbers of admission places available to meet all needs	<ul style="list-style-type: none"> • High demand for tertiary education, with only 40% of applicants finding admission places • Infrastructure deficits in public tertiary education institutions • Low enrolment in private tertiary institutions • Insufficient diversification and differentiation in tertiary institutions and course offerings 	<ul style="list-style-type: none"> • TE 1.1.1 Assess the manpower needs and priorities of the country • TE 1.1.2: Expand and upgrade facilities in public tertiary institutions and ensure that all facilities are disability-friendly, and establish new institutions, with sufficient differentiation and diversification • TE 1.1.3: Adopt policies that foster expansion of private participation in tertiary education delivery • TE 1.1.4: Establish an Open University to provide dedicated open and distance learning programmes and promote open education resources
TE 1.2: Increased participation by women, the disabled, and socioeconomically disadvantaged groups in tertiary education	<ul style="list-style-type: none"> • Gender disparity ratio of 0.69 in favour of males, instead of a GPI of 1 • Low participation by disabled and socioeconomically disadvantaged students 	<ul style="list-style-type: none"> • TE 1.2.1: Institute national policy guidelines for affirmative action in admission and funding assistance for disadvantaged groups • TE 1.2.2 Encourage tertiary education institutions (TEIs) to adopt and nurture SHS and TVIs in poor communities

Policy Objective 2: Improved quality of teaching and learning and STEM at all levels		
TE 2.1: Improved quality of teaching and learning resources	<ul style="list-style-type: none"> • Most laboratories and lecture halls are poorly-equipped, having less than 50% of what is required • Institutions have in place less than 50% of their ICT requirements • Less than 40% of lecturers in tertiary institutions have terminal qualifications • Majority of teaching staff do not have a teaching qualification • Poor quality assurance practices in TEIs 	<ul style="list-style-type: none"> • TE 2.1.1: Upgrade teaching and learning facilities in public TEIs, including ICT • TE 2.1.2: Support the capacity building of staff • TE 2.1.3: Promote quality assurance practices
TE 2.2: Strengthened STEM and TVET education at the tertiary level	<ul style="list-style-type: none"> • Participation in STEM education was 33% of total enrolments in 2016 and is not meeting the 60:40 science to humanities ratio set by the NCTE • Inadequate facilities for STEM education • Weak links between tertiary education and industry • Limited avenues for TVET graduates to acquire higher-level skills 	<ul style="list-style-type: none"> • TE 2.2.1: Provide adequate quality resources for STEM education in tertiary institutions • TE 2.2.2: Forge links with industry to enhance teaching and learning • TE 2.2.3: Strengthen Technical Universities as apex TVET institutions
TE 2.3: Improved research and postgraduate training	<ul style="list-style-type: none"> • Poor funding of research, with no institutional research grants • Inadequate coherent national research policy • Low output of quality research, less than 0.5 publications per lecturer per year • Low international ranking of Ghana's tertiary institutions, with only one ranked among the top 25 in Africa and in the 801–1000 band in the 2017 Times Higher Education world ranking • Low level of doctoral training in tertiary institutions; PhD students constitute 1% of total enrolments 	<ul style="list-style-type: none"> • TE 2.3.1: Determine national priority research areas and provide adequate and sustained funding for research infrastructure, human resources for research, and research activities

TE 2.4: Strengthened quality of teacher education	<ul style="list-style-type: none"> • Limited capacity for efficient and effective management of COEs • Poor coherence/correlation between teacher education curricula and school curricula • Ineffectiveness of the diploma programmes in COEs in responding to the country's needs • Ineffective quality assurance system across the teacher education sector • Weak teacher education curricula • Ineffective assessment systems in the teacher education system 	<ul style="list-style-type: none"> • TE 2.4.1: Upgrade management systems of COEs • TE 2.4.2: Implement National Teachers Standards and National Teacher Education Curriculum framework • TE 2.4.3: Convert COEs to University COEs and transform the diploma into a four-year degree programme derived from the National Teachers Standards and curriculum framework
TE 2.5 Improved job placement	<ul style="list-style-type: none"> • High levels of graduate unemployment • Ineffective industrial attachment of universities 	<ul style="list-style-type: none"> • TE 2.5.1 Improve counselling and job placement support
Policy Objective 3: Sustainable and efficient management, financing, and accountability of education service delivery		
TE 3.1: Harmonised policy and legislative framework and strengthened capacities for effective supervision and regulation of the tertiary education sub-sector	<ul style="list-style-type: none"> • Weak legal authority of NCTE and NAB • Perceived ambiguity regarding roles of NCTE and NAB • Weak capacity of NCTE and NAB to perform effectively and efficiently 	<ul style="list-style-type: none"> • TE 3.1.1: Develop a comprehensive tertiary education policy and strengthen the legal mandates and collaboration of NCTE and NAB • TE 3.1.2: Strengthen capacities within regulatory bodies for improved performance
TE 3.2: Strengthened governance and management of tertiary institutions	<ul style="list-style-type: none"> • Low capacity and inadequate expertise of governing bodies of tertiary institutions • Inadequate capacity for efficient and effective management of TEIs • Role conflict in private institutions, when chairman of the board may also be president of the institution • Weak academic boards/organs of private tertiary institutions, not reflecting academic character of institutions • Appointment of governing councils not based on clear criteria 	<ul style="list-style-type: none"> • TE 3.2.1: Strengthen capacity and expertise of leadership of tertiary institutions
TE 3.3: Improved and sustained funding of tertiary education	<ul style="list-style-type: none"> • Funding gap of 45% in 2016 • Inadequate infrastructure in public TEIs • Inadequate teaching and learning resources • Inadequate loan amounts for qualified 	<ul style="list-style-type: none"> • TE 3.3.1: Establish a sustainable funding policy

	students	
TE 3.4: Improved data collection and management	<ul style="list-style-type: none"> • Gaps in data • Inefficiencies in collection of data • Reluctance by tertiary institutions to complete NCTE data collection instruments • Ineffective M&E • Absence of an efficient data management system connecting all tertiary institutions to NCTE and the NAB • Absence of well-developed and functional tertiary education management information system 	<ul style="list-style-type: none"> • TE 3.4.1: Strengthen data collection and analysis systems, and strengthen M&E systems

3.7 Education management – Improved planning and management efficiency in the delivery of education

Educational leadership and management is a critical enabler for the successful implementation of all strategies and interventions within the identified sub-sectors of education. In the ESP education management includes responsibility for the planning, organisation, and efficiency of the system as a whole. As with the other sub-sectors, the policies for education management that have been prioritised are those that have a positive impact on learning outcomes, accountability for learning outcomes, and equity.

In terms of teacher management, absenteeism, attrition, and time-on-task have been widely recognised as a problem, with overall teacher absenteeism as high as 14% in 2014/15 and varying considerably by region. The teacher education curriculum is currently considered to be too content-heavy and lacking in pedagogical skill development. Additionally, the same training is given to all teachers from KG to JHS, with a lack of content knowledge that is specific to each level. Teacher deployment is also an area of concern, with large regional disparities in PTRs and weak correlation between the number of students and teachers within a district.

System accountability has, to date, not functioned effectively due to the three regulatory bodies (NaCCA, NTC, and NIB) lacking staff capacity, resources, and powers of enforcement. While the regulatory agencies are responsible for designing and enforcing accountability structures, the implementation of these structures spans the entire system. This requires human capacity and accountability mechanisms to be in place and functioning. The system as a whole lacks a sector-wide accountability framework at different levels of implementation – national and sub-national – and at a local level there is ample anecdotal evidence of weak supervision mechanisms. Linked to this is a lack of regular local data collection, collation, and use. In addition, while the private sector accounts for over 20% of enrolment at the basic level, over one-third of TVIs, and nearly half of all tertiary institutions, there is little monitoring or regulation of, or collaboration with, these institutions. The collection of data from the private sector has typically been difficult as it does not rely on public funding and therefore appropriate sanctions

cannot be applied when data are not forthcoming. A significantly lower proportion of teachers in the private sector are trained compared to those in the public sector and little research has been done on learning outcomes for the private sector.

The internal efficiency of the education system itself is a concern. Considering progression from primary to SHS, for every 100 children who enter Primary 1, only 38 complete SHS. This is supported by results showing significantly higher proportions of repeaters in each grade of pre-tertiary education than was previously thought. In SHS, for example, repetition is above 12% in every grade. Some of the remedies to address this challenge involve improving the quality of education and are reflected in other sub-sectors but some pertain to the quality of teaching and the management of the system, including school-level leadership and management.

A range of initiatives are ongoing to improve education management and leadership. T-TEL is a programme that aims to improve the quality, delivery, and management of the teacher education curriculum. This includes the design of a new teacher education curriculum leading to the conversion of the qualification from a diploma to a degree, with the associated uplift in entry requirements, as well as converting COEs into University COEs. In a drive towards the professionalisation of teaching, the PTPDM policy has been developed to define standards and competencies, and the process for teacher licensing and subsequent promotion. Some leadership and management training has taken place at the school level, such as through the SEIP and GPEG projects; however this is yet to be institutionalised in a national programme. A draft Education Bill is currently being considered before Parliament that would decentralise basic education management to the district level and so bring decision makers closer to relevant local information and education service delivery, as well as increasing their proximity to the impact of their decisions. Finally, various data collection systems are being piloted, such as the mSRC and District Quality Monitoring System at the basic level, while at secondary level a student information system linked to free SHS is to be rolled out shortly. There is also an ongoing project to support the strengthening of the national EMIS system to make the data more comprehensive, digital, and accessible. This will introduce new indicators, as well as upgrading the platform to make the data themselves, and simple report generation, more accessible and user friendly. In the medium term, there are plans to link EMIS with the tertiary and TVET sub-sectors by incorporating their data, and in the longer term, there is an ambition to link other datasets, such as student performance and human resources, so that EMIS can better serve as the primary data source for the education sector.

The ToC for education management relies on the promotion of using evidence in policymaking and planning at the national level. At the local level, decision makers must also be empowered to use evidence to improve the quality of teaching and learning, as well as to improve the efficiency of the local education delivery. This should happen as a consequence of decentralisation, which is part of the reform agenda, as well as improved capacity in leadership and management at the school level. An improved accountability system will serve as a crucial counterbalance to the increased decision-making power at the local level. There are various elements of the ToC which are linked to each other: for instance, improving the efficiency of teacher deployment and ensuring the allocation is equitable is not possible without a system that is based on local-level enrolment data, in order to match PTRs and resources appropriately.

More broadly, improved education management will require system changes, which can take time to implement but when done correctly will pay dividends for the sector. In general, when working properly, the education management sub-sector should ensure the smooth delivery of quality education in all other sub-sectors.

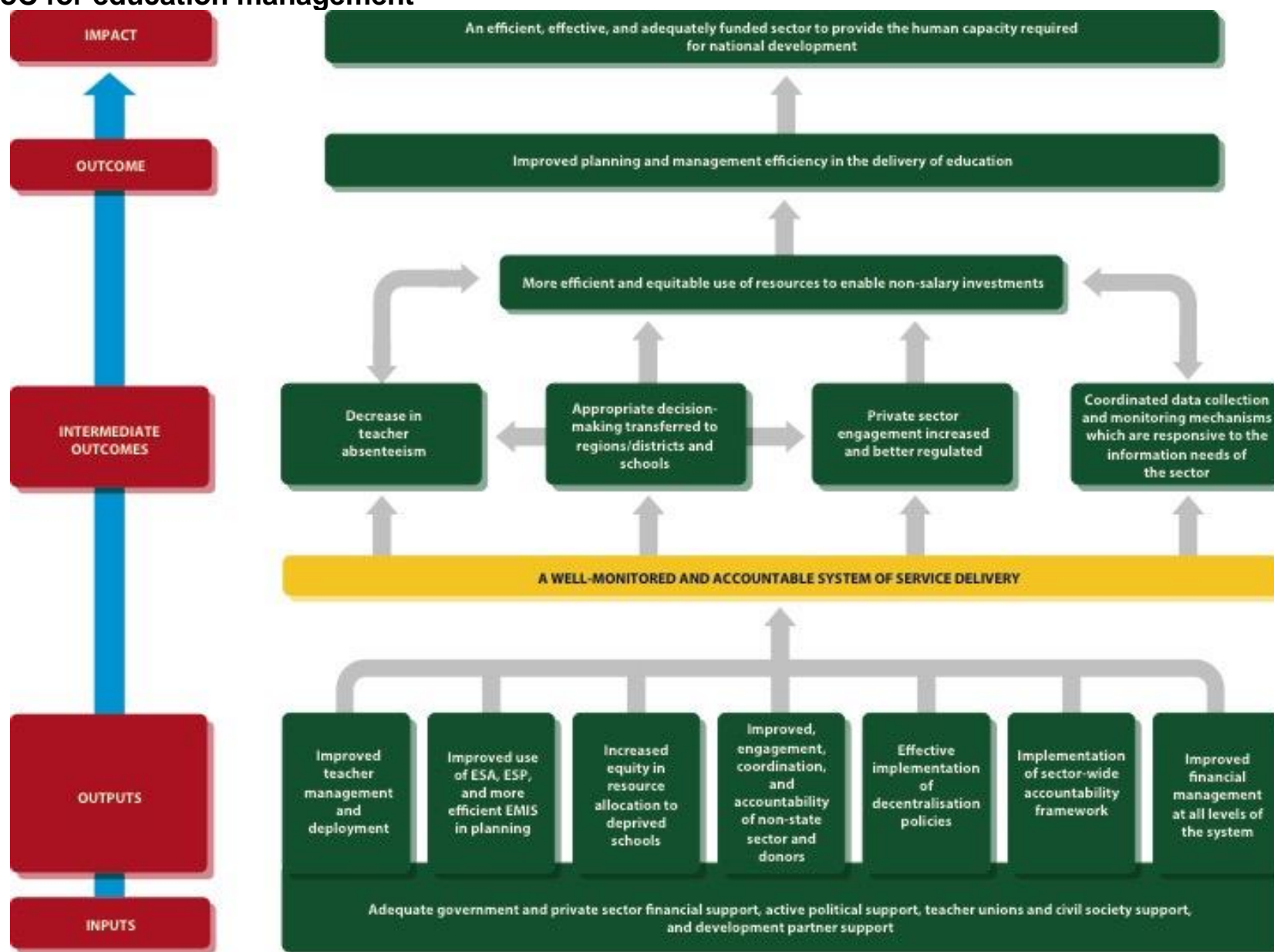
There are many aspects of the education management priorities which play a central role in GoG's reform agenda, which has 12 pillars, spanning the full range of the education system. The teacher education reform pillar is being supported by T-TEL and is linked with the development of the basic education curriculum to ensure that teachers are being appropriately trained to teach at specific levels (KG, primary, and JHS) to deliver the new curriculum. The professionalisation of teachers is another high-level priority, which builds on the work of the PTPDM policy to properly register, license, and set standards for all teachers in Ghana. Teachers will be issued with a provisional licence, which will be upgraded to a full licence when they have successfully passed teaching competencies at assessment points, such as applying for promotion. These reforms to teacher education and management are anticipated to have a direct impact on learning outcomes but must be supported by background changes that will make the system operate more efficiently. These include a review of GES human resources and the roll out of a system to ensure that teacher deployment is linked to both the characteristics of the teacher, in terms of their qualification level and mother tongue language, as well as to local school needs based on enrolment numbers. This will require stronger linking between the GES human resources database and EMIS and the inclusion of more teacher characteristics in the human resources database. On the supply side, this system will also be linked to the COEs, to ensure that the pipeline of teachers graduating is appropriate for the needs of the education system. The deployment and management of teachers for basic education will become a responsibility of the districts after the decentralisation bill is passed.

At a wider system level, the NIB is leading a reform pillar on improved school supervision and inspection systems. The development of a sector-wide accountability framework will be closely linked to this and will ensure that every link in the accountability chain from the MOE to the school level is transparent, in order to improve accountability for learning outcomes and equity. There is a renewed focus on improving school leadership and management across the system and the establishment of a School Management Division within GES will spearhead this work. As articulated in the sections on basic education and SHS, a public–private partnership project will be started on a small scale, whereby GoG will partner with non-state organisations working on a not-for-profit basis to improve learning outcomes in under-performing schools through different management strategies and teaching and learning techniques. It will then be possible for the lessons and successful practices from this pilot to be incorporated and disseminated throughout the public education system to support other under-performing schools to improve. Finally, strengthening data collection and management systems is a key enabling priority in order to improve accountability for learning outcomes. This means continuing the ongoing work to improve the national EMIS as well as harmonising the collection, storage, and analysis of other data sources, as well as ensuring that the local capacity to collect and use data in decision-making is improved.

KPIs (disaggregated by sex, location, wealth, and disability, when possible) for the education management sub-sector are as follows:

- rate of teacher absenteeism;
- proportion of teachers having undergone NTC-approved in-service training/continuous professional development (CPD);
- proportion of districts with appropriate PTR for assessed need;
- proportion of districts with Annual District Education Operational Plan (ADEOPs) at the beginning of the school year;
- % of MMDAs that are fully decentralised, with fiscal responsibility, as set out in the GES decentralisation bill; and
- % of private schools registered.

ToC for education management



3.7.1 Education management: from policy objectives to strategies

SUB-POLICY OBJECTIVE	MAIN PROBLEMS TO ADDRESS	STRATEGIES
Policy Objective 3: Sustainable and efficient management, financing, and accountability of education service delivery		
EM 3.1: Improved mechanisms for efficient teacher management	<ul style="list-style-type: none"> • High levels of teacher absenteeism and weak teacher time-on-task at pre-tertiary level, especially at the public primary school level, negatively affect learning achievement • Teacher career progression is not based on competencies and standards • Poor distribution of teachers and teacher rationalisation • Absence of real-time data on teacher distribution • Inadequate career opportunities and appropriate housing for teachers in rural areas • Inadequate regular continuous professional development of teaching staff, and use of outdated pedagogy in classroom transactions • Mismatch between the subject in which the teacher is trained and what they teach 	<ul style="list-style-type: none"> • EM 3.1.1 Strengthen school inspection and supervision practices under the leadership of NIB • EM 3.1.2: Implement the PTPDM policy, with its associated continuous professional development and career progression • EM 3.1.3: Strengthen teacher recruitment and deployment, including by implementing a human resources policy
EM 3.2: Improved capacity to use evidence to inform plans of MOE and its agencies and institutions, and MMDAs	<ul style="list-style-type: none"> • MOE/GES lacks a framework for carrying out systematic research to govern policies • Poor coordination among agencies of the MOE and other ministries • Systemic implementation challenges resulting from inadequate capacity of actors, resource mobilisation, and insufficient community involvement 	<ul style="list-style-type: none"> • EM 3.2.1: Coordinate and promote evidence, evaluation, and research to strengthen policymaking and strengthen the research unit within the MOE • EM 3.2.2: Develop staff capacity to use evidence and mechanisms for strengthening coordination among agencies and units of the MOE

EM 3.3: Improved financial management and equity in resource allocation	<ul style="list-style-type: none"> • Inadequate, inequitable, and inefficient school financing, and over-dependence on donor resourcing for non-salary expenditure, especially at the basic education level • Inadequate GoG expenditure on goods and services, as compensation takes more than 90% of total expenditure • Inability of the districts, units, and institutions to mobilise (and manage) resources efficiently at all levels • Inadequate financial commitment by GoG on donor-supported projects can lead to poor sustainability 	<ul style="list-style-type: none"> • EM 3.3.1: Strengthen transparency in the allocation and management of funds from the national to the school level • EM 3.3.2: Improve equity in resource allocations to schools and agencies • EM 3.3.3: Encourage national, regional, district, and institutional units to mobilise funds domestically to support basic education
EM 3.4: Strengthened sector-wide approach to coordinate NGOs, CSOs, and donor partners' support to ensure smooth implementation of the ESP	<ul style="list-style-type: none"> • Inadequate sector-wide approach of donor agencies, CSOs, and NGOs in their activities 	<ul style="list-style-type: none"> • EM 3.4.1: Improve coordination and accountability for donor and CSOs'/NGOs' support of ESP
EM 3.5: Strengthened operational structures of MOE/agencies for effective oversight and implementation of decentralisation	<ul style="list-style-type: none"> • Regulatory agencies such as NCTE, NAB, NaCCA, NIB, NTC, and other units, and NFED and GES, remain inadequately resourced and thereby negatively affect their effectiveness • The acts of regulatory bodies do not enable the sanctioning of offenders • Lack of clarity over decentralisation process, resulting in confusion over roles of MMDAs, schools, and officials 	<ul style="list-style-type: none"> • EM 3.5.1: Review the operating acts of the various regulatory bodies and resource them in order to strengthen them to support decentralisation • EM 3.5.2: Implement the education decentralisation policy

EM 3.6: Strengthened education service delivery through collaboration with non-state actors	<ul style="list-style-type: none"> • Poor learning outcomes of public schools, especially at basic level, as evidenced by EGRA and EGMA performance and poor BECE results • Inadequate information on private sector schools (scale and learning outcomes) • High proportion of untrained teachers in private schools 	<ul style="list-style-type: none"> • EM 3.6.1: Develop and strengthen engagement of non-state actors in the provision and management of education at local and school levels
EM 3.7: Improved ICT use in education at all levels	<ul style="list-style-type: none"> • Inadequate ICT infrastructure in schools and poor quality of service • Limited ICT in schools and uneven distribution of facilities • Limited and costly bandwidth • Poor funding of ICT 	<ul style="list-style-type: none"> • EM 3.7.1: Strengthen ICT in education policy • EM 3.7.2: Improve ICT resources and infrastructure in educational institutions
EM 3.8 Strengthened data systems and accountability throughout the education system to support the implementation of the reform agenda	<ul style="list-style-type: none"> • Weak accountability rules and practices • High levels of teacher absenteeism and weak teacher time-on-task at pre-tertiary level, especially at the public primary school level, negatively affects learning achievement • Limited effective accountability mechanisms available to hold private schools to account for quality of education • Limited capacity to design and implement policy reforms in a coordinated manner • The paper-based SRC is time-consuming and does not provide real-time data for schools • Inaccurate and unreliable EMIS data 	<ul style="list-style-type: none"> • EM 3.8.1: Design, implement, and enforce an education accountability framework along the chain of education service delivery, from the MOE to the school level • EM 3.8.2: Strengthen M&E units and processes throughout the education system to improve the EMIS • EM 3.8.3: Establish and operationalise a reform secretariat to drive policy reform and associated delivery units to oversee implementation of reforms

4 ESP projected resources and costs

This chapter looks at the projected resources that will be provided to implement the ESP from 2018 to 2030, as well as the costs of implementation. A costs model was developed which incorporates the projected number of pupils and students, the input costs of teaching and learning, and the costs of the policy priorities in the ESP in an estimation of costs for the education sector to 2030. This is then compared to the expected resources for the education sector over that same time period.

First, the chapter shows the projected resources provided to the education sector as outlined in the Medium-Term Expenditure Framework 2018–2021, presented to Parliament in November 2017. The budget allocations for these four years are projected to 2030 for input into the model.

The second section of the chapter shows the education sector cost projections. First, the costs of the education sector as it currently stands are projected from 2018 to 2030. This ‘status quo’ projection includes the costs of reforms and new policies that have already been implemented to date, such as free SHS, refurbishment of basic education schools, and increased capitation grants. Next, the additional costs of reforms and policies in the ESP are presented for the medium term (aligned with the ESMTDP 2018–2021). These are projected to 2030 and added to the ‘status quo’ costs. In addition, the cost projections incorporate a number of efficiency savings introduced to improve the financial sustainability of the plan.

4.1 Education sector projected resources 2018–2021

This section of the chapter shows the projected resources to be provided to the education sector as outlined in the Budget Vote for the 2018 budget presented to Parliament on 15 November 2017 (Ministry of Finance and Economic Planning (MOFEP) 2017). The Budget Vote gives a medium-term budget framework for 2018 to 2021, with projections for GDP, the national government revenue, and the resource estimates for the education sector for these four years. These 2018 to 2021 resource estimates are projected to 2030 for input into the model.

MOFEP reported in the 2018 budget that the economic outlook for Ghana had improved in the 2017 budget year, with real GDP growing at 7.8%, compared to the average growth between 2014 and 2016 of 3.9%. Inflation dropped 4.2 percentage points to 11.6%. The outlook for the next four years is positive, with a target GDP growth rate for 2018 of 6.8% in real terms and an average inflation rate of 9.8%. GDP is projected to grow in real terms by 7.3% in 2019 and to level off slightly in 2020 and 2021, to 5.6% and 6.3% respectively.

Table 3 below shows the projected GDP and the medium-term total government budget, as well as that for education between 2018 and 2021.

Government revenue is projected to be 25% of GDP across the four years, with the resource estimates for the education sector being 4.2% of GDP in 2018, dropping slightly to 3.9% in 2021. Education resources are projected to be 23% of government revenue (excluding debt service), dropping to 20.3% by 2021.

Table 3: Projected GDP, central government budget allocation, and education sector projected budget 2018–2021 (Ghanaian cedi (GHC) billions)

	2018	2019	2020	2021
GDP (nominal)	241 718	281 794	324 160	372 115
GDP non-oil (nominal)	229 559	265 641	306 930	354 681
Real GDP growth	6.8%	7.3%	5.6%	6.3%
Non-oil real GDP growth	5.4%	5.9%	6.0%	6.1%
Government revenue	61 152	70 815	79 572	87 336
Debt service	14 910	16 308	15 939	16 432
Government revenue (excluding debt service)	46 242	54 507	63 633	70 904
Government revenue as % of GDP	25.0%	25.0%	25.0%	24.0%
Education budget (including GETFund and ABFA)	10 650	11 164	12 788	14 357
Of which: GETFund*	925	1 239	1 921	2 253
Of which: ABFA*	466	0.513	0.564	0.620
Education budget as a % of total GDP (including GETFund and ABFA)	4.2%	4.0%	3.9%	3.9%
Education resources as % of government revenue (excluding debt service)	23.0%	20.5%	20.1%	20.3%

* The GETFund (from VAT) and ABFA (from oil revenue) are earmarked funds for education. They are not under the Education Vote in the budget documents but are under the general administrations transfers to government ministries.

Source: MOFEP 2017.

The education resource allocation is composed of three sources: the government allocation (including the GETFund and ABFA); internally generated funds (IGF), which are predominantly fees and levies from tertiary students; and funds raised from external sources, including donor contributions and other loans.

The table below shows the total resource allocation for education; the government allocation only – with and without salary arrears; the IGF resources; and the funds from external resources. In 2018 the total Medium Term Expenditure Framework (MTEF) budget allocation to education was GHC 9.259 billion. This increases in nominal terms by 7% in 2019, 9% in 2020, and 11% in 2021. When adjusted for expected inflation, this constitutes approximately a 2% decrease in real terms in 2019 but a real increase of 2% and then 4% in 2020 and 2021.

Funding for education from sources other than the MTEF budget allocation to education are the GETFund; ABFA; funding from other government departments to education – viz. Ministry of

Gender and Social Services and the District Common Fund; and funds raised from other sources such as commercial loans.

Table 4: Education sector projected revenue 2018–2021 (GHC billions)

	2018	2019	2020	2021
Total budget allocation (excluding GETFund and ABFA)	9.259	9.925	10.867	12.104
Government allocation	7.306	8.125	9.223	9.606
Of which: salary arrears*	0.650			
Excluding salary arrears	6.656	9.925	10.867	12.104
Internally generated funds**	1.627	1.508	1.396	2.460
Donors	0.326	0.292	0.248	0.038
Other sources of funding				
GETFund	0.925	1.239	1.921	2.253
ABFA	0.466	0.513	0.564	0.620
Other government departments' allocations to education	0.591	0.618	0.651	0.631
Funds raised from external sources and loans	0.372	0.372	0.372	0.162
Total resources	11.613	12.153	13.810	15.150

* Salary arrears are in the final year of being phased out from the single spine adjustment.

** Internally generated funds for SHS are completely phased out in the 2019/2020 academic year.

Source: MOFEP 2017.

4.2 Cost projections

Two cost projections are presented in this section. The costs of the education sector as it currently stands are projected from 2018 to 2030. This 'status quo' projection includes the costs of reforms and new policies that have already been implemented to date. Next, the costed reforms and policies from the ESP are presented for the next four years, as aligned with the ESMDTP. These are projected to 2030 and added to the 'status quo' costs. In addition, this cost projection incorporates a number of efficiency savings introduced to improve the financial sustainability of the plan.

In order to review the financial sustainability of the ESP, the costs which incorporate the policy priorities are compared to the resource estimates for education. Two scenarios are examined: the first assumes that resources provided to education increase by 2% per annum in real terms and the second assumes that they increase by 3% per annum. The 2% growth rate has been identified based on historical trends in expenditure between 2013 and 2016, which saw a growth in real terms of 2%. It has therefore been considered pragmatic to assume a continued resource

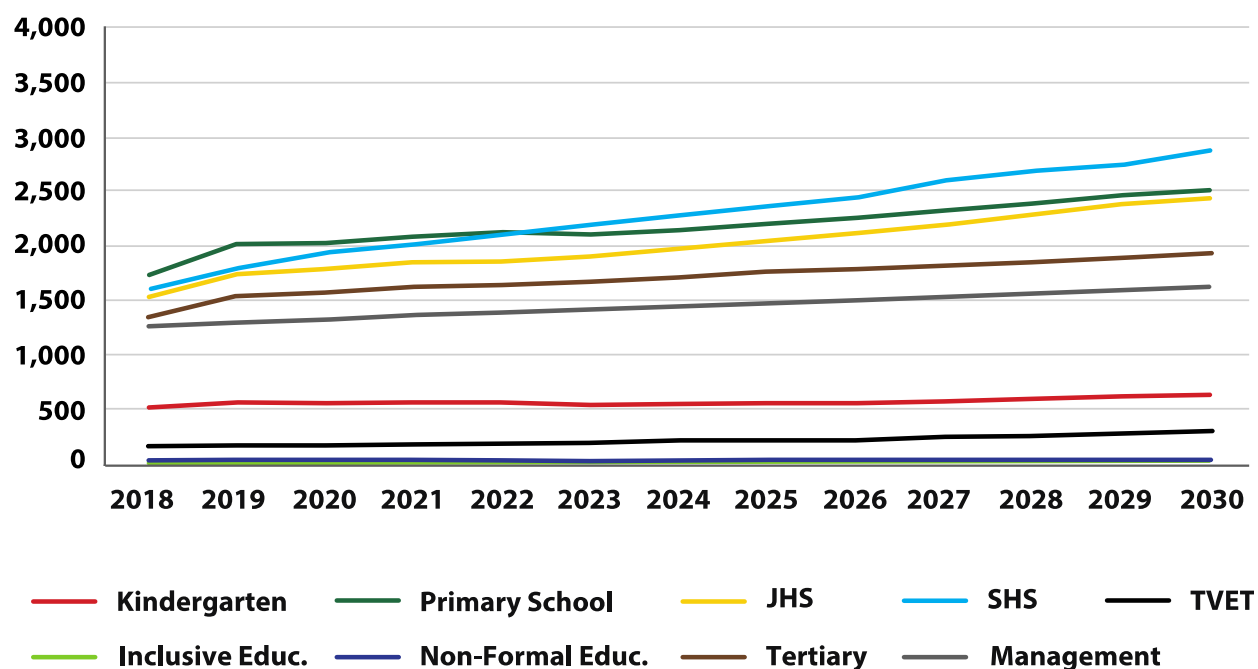
growth of 2% in real terms. However, as government expenditure is predicted to grow at a higher rate than 2%, a 3% rate scenario is also considered.

4.2.1 Costs of the status quo and the estimated revenue for the education sector to 2030

The purpose of the status quo model is to ascertain the costs of the education system with no changes to either the current cost structure or implementation of efficiency savings. There are a number of assumptions that have had to be made in generating the projected costs. The most important of these are as follows:

- The status quo projection bases the sector costs on the learner projection in the Cost and Finance Thematic Paper (Perry *et al.*, 2018) but does not assume any efficiency savings in relation to the number of learners repeating.
- The current PTRs are retained.
- There are a number of new initiatives, such as the increased capitation grant, base grants to schools, free SHS, and increased TLMs and textbooks, that are included in the status quo cost projections. These costs have already been budgeted and transferred to schools for the 2018 budget year and are ongoing commitments.
- Capital projects, such as refurbishment of dilapidated buildings, new KG blocks, and canteens for SHS are included in the status quo projection.
- No new classrooms in primary, JHS, or SHS are costed in the status quo projection.
- Secondary and tertiary education sub-sector cost projections do not include the costs of TVET institutions that will move from other ministries to the MOE. There would need to be a far more comprehensive analysis of the costs for each institution being transferred for this to be meaningful.
- The TVET sub-sector enrolment is assumed to grow at 6% per annum.
- The tertiary education sub-sector enrolment is assumed to continue to grow at its current rate of 5% per annum for the next five years as the cohort of SHS students exiting to tertiary education increases. It is unlikely that this growth will be sustained in the longer term and the projections assume that there will be a gradual tapering off to 3% growth from 2023 to 2030.

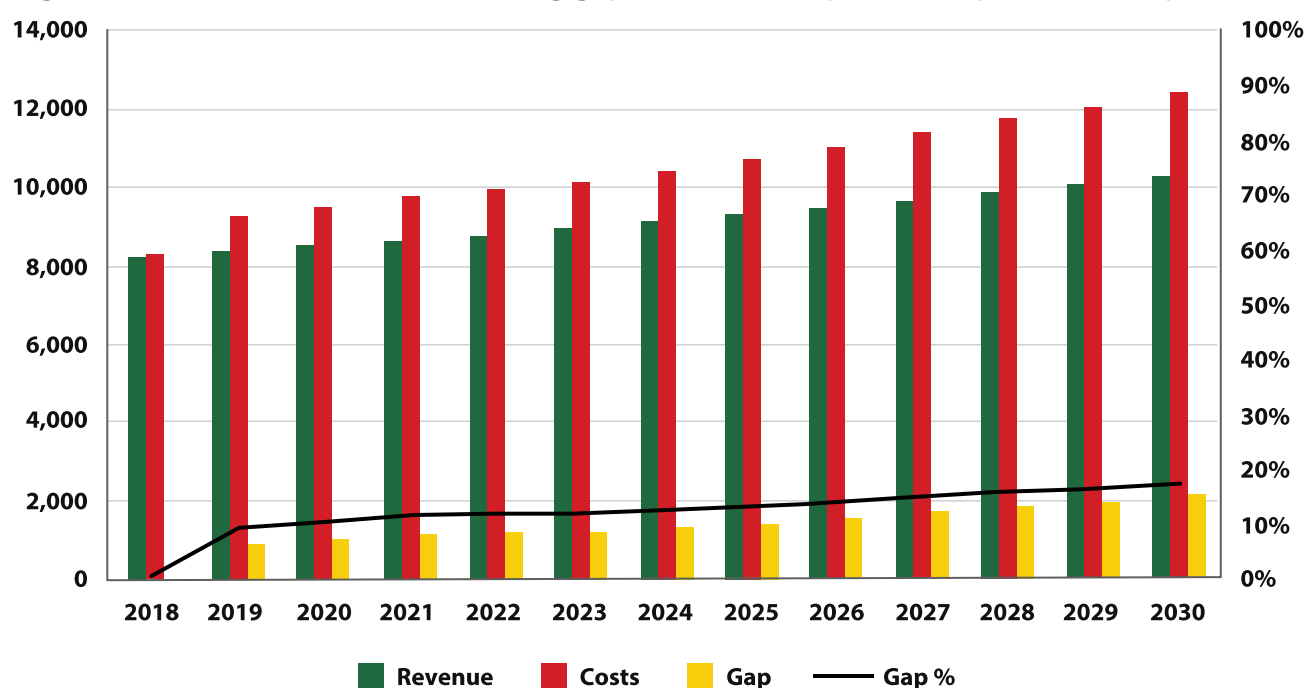
The following figure shows each sub-sector's cost projections in the status quo model. The fastest growing sector is the SHS sector. As free SHS is phased in the need to replace the internally generated funds, which constituted 45% of SHS resources, increases the costs of SHS, which move from GHC 1.6 billion in 2018 to GHC 2.9 billion in 2030.

Figure 3: Cost of the status quo by sub-sector (GHC millions)

Note: Tertiary costs are government expenditure only. They do not include IGF, which in 2016 accounted for nearly over 50% of tertiary expenditure.

Source: Perry *et al.* (2018)/Ghana ESP Cost Projection Model (2018)

The following figure shows the projected costs of the status quo model for the whole education sector, as well as the projected resources provided to the education sector. Since this is the status quo, resources do not include income raised specifically for the ESP. The resources shown here only include income from government, the GETFund, ABFA, and half the revenue expected from donors. The funding gap is shown as the difference between the costs and projected resources, and as a percentage of costs. In 2018 the gap is 0.4% but increases rapidly to 9% and 12% in 2019 and 2021, respectively. By 2030 the gap between costs and projected resources is 17%; this equates to GHC 2.175 billion.

Figure 4: Revenue, cost, and funding gap of the status quo model (GHC millions)

Note: Resources include government, donors, and GETFund, but excludes salary arrears and internally generated funds, which are primarily from student fees and levies.

Source: Perry *et al.* (2018)/Ghana ESP Cost Projection Model (2018)

4.2.2 Costs of interventions to support reform priorities and enabling policies

This section shows the costs of the education sector, including the costs of the interventions outlined in the ESP and a number of the supporting policies that have significant cost implications.

The following tables show the first four years of policy costs for each sub-sector (in line with the ESMDTP) identified as necessary in order to achieve the objectives of the ESP. Many of these costs are ongoing and where this is the case the projections include these further costs.

In the basic education sub-sector, increased access is facilitated by programmes for disadvantaged pupils, such as the School Feeding Programme, which supports 30% of learners in basic schools, and supplies of uniforms and sandals. Quality improvement is to be effected through increased supplies of TLMs and textbooks. Alongside this are substantial initiatives to reform the basic school curriculum, which is due to be implemented from the 2018/19 school year. Training of teachers and management at district, inspectorate, and school levels is in line with these efforts to improve the quality of basic education.

Capital infrastructure in this sector will be improved under the project to renovate dilapidated buildings and to build KG blocks on existing primary school properties. The costs of addressing

classroom shortages and backlogs are spread over the first 10 years but run concurrently with efforts to ensure that additional classrooms are in place for growth in learner numbers.

Table 5: Policy costs for basic education

Basic education (costs in GHC millions)				
	2018	2019	2020	2021
Policy Objective 1: Improved equitable access to and participation in inclusive quality education at all levels				
BE 1.1: Increased enrolment in basic schools, particularly in disadvantaged communities	950.7	996.7	1004.6	1024.0
BE 1.2: Achieved and sustained gender parity in access to quality basic education, with a focus on reducing regional disparities	6.00	6.15	6.15	6.15
Policy Objective 2: Improved quality of teaching and learning and STEM at all levels				
BE 2.1: Increased use of quality TLMs in basic education	162.42	525.82	429.88	433.97
BE 2.2: Improve learning assessment to support learning achievement of basic school pupils		0.5	0.5	0.5
BE 2.3: Improved learning environments, including health and sanitation, child protection, and guidance and counselling, in basic schools	11.3	10.4	10.4	10.4
BE 2.4: Improved quality and relevance of basic education curriculum	55.4	33.5	98.3	46.1
BE 2.5: Enhanced instructional practices of basic education teachers and head teachers	3.45	28.45	28.45	28.45
BE 2.6: Improved STEM education quality and relevance of teaching and learning at the basic school level	19.2	19.2	19.2	19.2
Policy Objective 3: Sustainable and efficient management, financing, and accountability of education service delivery				
BE 3.2: Strengthened financial management, coordination, and accountability in basic education	1.5	1.5	1.5	1.5
BE 3.3: Improved planning, monitoring, evaluation, and reporting systems	1.2			
Total	1324	1794	1774	1747

Source: ESMTDP 2018–2030

The roll-out of free SHS has a number of cost considerations attached to increasing equity in both the access to SHS and improved quality of schools in disadvantaged areas. The implementation of free SHS has meant the phasing out of fees and levies for students, as well as offering subsidies to day students who incur costs of transport or private boarding. The upgrading of 42 SHS day schools to model SHS is intended to increase access, with more students attending day SHS instead of incurring the costs of boarding.

Currently, the ratio of boarding to day students is 57:43, it is assumed that the ratio will shift to 40:60 by 2030, through the provision of SHS classrooms in under-served areas. The construction of smaller day SHS is not currently costed in the ESP. Further funding strategies will be sought for this development.

Provision is made for the building of regional STEM centres and curriculum revision is planned to start in 2022.

Table 6: Policy costs for secondary education

Secondary education (costs in GHC millions)				
	2018	2019	2020	2021
Policy Objective 1: Improved equitable access to and participation in inclusive quality education at all levels				
SE 1.1: Policy to ensure public SHS is free for all Ghanaian children is implemented	645.4	707.1	798.3	817.1
SE 1.2: Improved access for disadvantaged groups	7.2	6.8	6.8	6.8
Policy Objective 2: Improved quality of teaching and learning and STEM at all levels				
SE 2.1: Increased use of quality TLMs and equipment in SHS	72.0	61.2	63.2	64.5
SE 2.2: Improved learning outcomes for girls in all subjects, and for all students in STEM subjects	57.3	57.6	57.9	58.2
SE 2.3: Improved quality and relevance of SHS curriculum and enhanced delivery of curriculum and assessment framework ⁷ .	0.0	0.5	3.2	2.8
Policy Objective 3: Sustainable and efficient management, financing, and accountability of education service delivery				
SE 3.1: Strengthened supervision, management, and accountability in SHS	0.4	0.8		
SE 3.2: Improved research, monitoring, evaluation, and reporting systems	0.1	0.1	0.1	0.1
Total	801	868	958	978

Source: ESMTDP 2018–2030

The TVET sub-sector has a number of policy initiatives over the next four years, including a substantial number of new capital projects, including retooling and refurbishing existing facilities and building 20 model TVET institutions over the next 10 years.

The projected costs for this sub-sector include a few initiatives which are tertiary-level costs, such as the addition of teacher training at technical universities and the tertiary pro rata of the establishment of the skills development fund. However, due to the difficulty of pro rating the costs, these are costed under the TVET sector, which normally only covers the senior high level costs.

⁷ NOTE: Roll-out to begin in 2022, with GHC 101 million to be spent between 2022 and 2025

Included in this cost framework are a number of the ongoing costs of staffing and running the new institutions, as well as the costs of TLMs.

Table 7: Policy costs for TVET

TVET (costs in GHC millions)				
	2018	2019	2020	2021
Policy Objective 1: Improved equitable access to and participation in inclusive quality education at all levels				
TVET 1.1: Expanded and upgraded teaching, learning, and training infrastructure to increase access	0.2	149.0	150.8	152.8
TVET 1.2: Increased enrolment of all categories of learners, including females, PWD, and disadvantaged groups	1.0	4.2	4.1	4.1
TVET 1.3: Improved public perception and attractiveness of TVET through rebranding and popularisation	4.00	4.00	4.00	4.00
Policy Objective 2: Improved quality of teaching and learning and STEM at all levels				
TVET 2.1: Improved quality of TVET provision		2.0	55.2	2.9
TVET 2.2: Improved relevance of the TVET curriculum to labour market demands and emerging economic sectors	2.6	9.6	4.0	0.0
Policy Objective 3: Sustainable and efficient management, financing, and accountability of education service delivery				
TVET 3.1: A strong legal, governance, and regulatory framework for greater coherence and accountability of the TVET system	2.85	5.13	2.00	2.00
TVET 3.2: Adequate and sustainable financing and accountability of TVET delivery	42.6	42.6	42.6	42.6
Total	156	248	284	236

Source: ESMTDP 2018–2030

The two key areas of expansion for NFE are the building of 30 community centres and an increase in the TLMs available. Some new training initiatives will be offered, in the areas of occupational and vocational literacy, to improve productivity.

Table 8: Policy costs for NFE

NFE (costs in GHC millions)				
	2018	2019	2020	2021
Policy Objective 1: Improved equitable access to and participation in inclusive quality education at all levels				
NFE 1.1 Increase enrolment in NFE programmes	0.08	3.81	3.525	3.5
NFE 1.2 Increase awareness of NFE programmes		0.48	0.59	0.44
Policy Objective 2: Improved quality of teaching and learning and STEM at all levels				
NFE 2.1 Improved quality of programme delivery, including curriculum, TLMs, assessment, and progression	0.485	0.8	1.075	0.775
Policy objective 3: Sustainable and efficient management, financing, and accountability of education service delivery				
NFE 3.1 Coherent legal and institutional framework that allow NFE to respond to NFE demand provided	0.515	0.35	0.24	
3.2 Adequate and sustainable financing and allocation resources to all NFE operations	0.5	0.5	0.5	0.5
3.3 Accountability and quality assurance mechanism of NFE programmes delivery strengthened	0.3	0.3	0.15	0.15
Total	1.6	6.2	6.2	5.4

Source: ESMTDP 2018–2030

Inclusive and special education will see an increase in the feeding grant, as well as an increase in the capitation grant. Initiatives by the NTC to integrate teaching methods that are more suited to this sub-sector, such as multi-grade teaching and peer to peer support, as well as increasing the supply of relevant TLMs, are included in the costs.

Efforts to create suitable environments for learners with SEN to integrate effectively into schools are also costed. The amount costed for capital development is relatively small and given the needs of this sector it seems that further investigations should be made into how to speed up the provision of specialised schools for children with SEN.

Table 9: Policy costs for inclusive and special education

Inclusive and special education (costs in GHC millions)				
	2018	2019	2020	2021
Policy Objective 1: Improved equitable access to and participation in inclusive quality education at all levels				
ISE 1.1: Expanded/transformed school infrastructure to encourage enrolment of learners with SEN	13.9	19.0	18.9	19.4
ISE 1.2: Safer, more friendly, and inclusive environment for learners with SEN created	0.0	1.3	1.9	0.1
ISE 1.3: Strengthened systems for the early detection of learners with SEN	0.3	0.5	0.5	0.1
ISE 1.4: Increased enrolment of vulnerable populations and learners with SEN from excluded groups	11.5	12.0	12.7	13.3
Policy Objective 2: Improved quality of teaching and learning and STEM at all levels				
ISE 2.1: National curricula content, assessment processes, and benchmarks reviewed, revised or adapted, and teachers trained to deliver curriculum effectively	6.4	1.2	1.3	1.3
ISE 2.3: Educational personnel, administrators, parents, and community oriented and sensitised on inclusion and inclusive practices	0.0	0.1	1.2	0.0
Policy Objective 3: Sustainable and efficient management, financing, and accountability of education service delivery				
ISE 3.1: Research, monitoring, and evaluation systems strengthened				
ISE 3.2: Smooth implementation of inclusive education policy	0.08			
Total	32.12	34.19	36.41	34.19

Source: ESMTDP 2018–2030

The tertiary education sector has a number of strategies to expand admission places, including expanding the infrastructure of tertiary institutions, increasing the number of appropriately trained staff, and developing the Open University of Ghana. A large investment is to be made from 2019 to 2021 in the building of the University of Environment and Sustainable Development. This will be co-funded by external commercial loans.

Quality improvements, such as restocking libraries, equipping laboratories, and upgrading the IT infrastructure are planned. As the COEs become part of the tertiary sector a number of initiatives in this regard are necessary, including legal, curriculum development, and staff training initiatives.

Table 10: Policy costs for tertiary education

Tertiary education (costs in GHC millions)				
	2018	2019	2020	2021
Policy Objective 1: Improved equitable access to and participation in inclusive quality education at all levels				
TE 1.1: Increased numbers of admission places available to meet all needs	10.6	163.8	163.5	163.5
TE 1.2: Increased admission and participation by women, the disabled, and socioeconomically disadvantaged groups in tertiary education	1.4	1.3	1.3	1.3
Policy Objective 2: Improved quality of teaching and learning and STEM at all levels				
TE 2.1: Improved quality of teaching and learning resources	4.3	13.0	13.0	11.0
TE 2.2: Strengthened STEM and TVET education at the tertiary level	0.1	0.3	54.3	54.0
TE 2.3: Improved research and postgraduate training	1.6		0.1	
TE 2.4: Strengthened quality of teacher education	44.9	42.1	42.0	27.1
Policy Objective 3: Sustainable and efficient management, financing, and accountability of education service delivery				
TE 3.1: Harmonised policy and legislative framework and strengthened capacities for effective supervision and regulation of the tertiary education sub-sector	0.3			
TE 3.2: Strengthened governance and management of tertiary institutions	1.3			
TE 3.3: Improved and sustained funding of tertiary education	0.3			
TE 3.4: Improved data collection and management		0.4		
TE 3.5: Improved job placement				
Total	63.34	215.38	268.83	251.53

Source: ESMTDP 2018–2030

The education management sub-sector includes funding of MOE and GES staff at the national, regional, and district level. It also includes funding for the various management agencies, as well as for goods and services provided to the regional and district offices. Under the ESP a number of initiatives seek to bring about more effective management of resources and training of national, regional, and district staff. In order to facilitate the most effective deployment of teachers there are initiatives to address the teacher post provisioning norms. Coordinating the management of education and collaboration with the non-governmental sector is becoming a higher priority as alternative strategies for managing and financing education are needed.

Table 11: Policy costs for education management

Education management (costs in GHC millions)				
	2018	2019	2020	2021
Policy Objective 3: Sustainable and efficient management, financing, and accountability of education service delivery				
EM 3.1: Improved mechanisms for efficient teacher management	17.0	20.7	11.2	10.6
EM 3.2: Improved capacity to use evidence to inform plans of MOE and its agencies and institutions, and MMDAs	1.5	4.2	1.5	1.5
EM 3.3: Improved financial management and equity in resource allocation				
EM 3.4: Strengthened sector-wide approach to coordinate NGOs', CSOs', and donor partners' support to ensure smooth implementation of the ESP	0.378			
EM 3.5: Strengthened operational structures of MOE/agencies for effective oversight and implementation of decentralisation	0.336		0.504	
EM 3.6: Strengthened education service delivery through collaboration with non-state actors	0.21	2.1	2.1	2.1
EM 3.7: Improved ICT use in education at all levels	0.42	11.02		
EM 3.8 Strengthen data systems and accountability throughout the education system to support the implementation of the reform agenda	3.448	2.89	1	1
Total	23.3	40.9	16.3	15.2

Source: ESMTDP 2018–2030

4.2.3 Efficiency savings

There are a number of areas in which improvements in the efficiency and cost-effectiveness of interventions will allow funds to be targeted to the areas of greatest need. Initiatives are planned to improve teaching time in the classroom and introduce multi-grade teaching where appropriate and effective. Encouraging demand for and increasing the access to day schools at the SHS level would reduce costs too.

However, the most significant areas of cost inefficiency relate to the repeater rates and dropouts, and the deployment of teachers. In the pupil projection, repetition rates have been reduced and the current PTRs increased. However, the MOE recognises that realising these targets will involve a significant implementation effort. The following are the specific efficiency savings projected in the model:

- Reducing the under-age children in KG 1 over a three-year period and increasing the kindergarten PTR to 35:1 over a five-year period.
- Increasing the primary PTR to 35:1 over five years and reducing the repetition and dropout rates by one percentage point per year.
- Increasing the JHS PTR from its current level of 14:1 to 25:1 by 2025.
- Increasing the SHS PTR from its current level of 20:1 to 25:1. (However, this does not actually decrease the costs of the sector given its rapid growth over the same time period. The greatest efficiency saving would be from implementing a less expensive model of schooling with more day student enrolment and less boarding.)

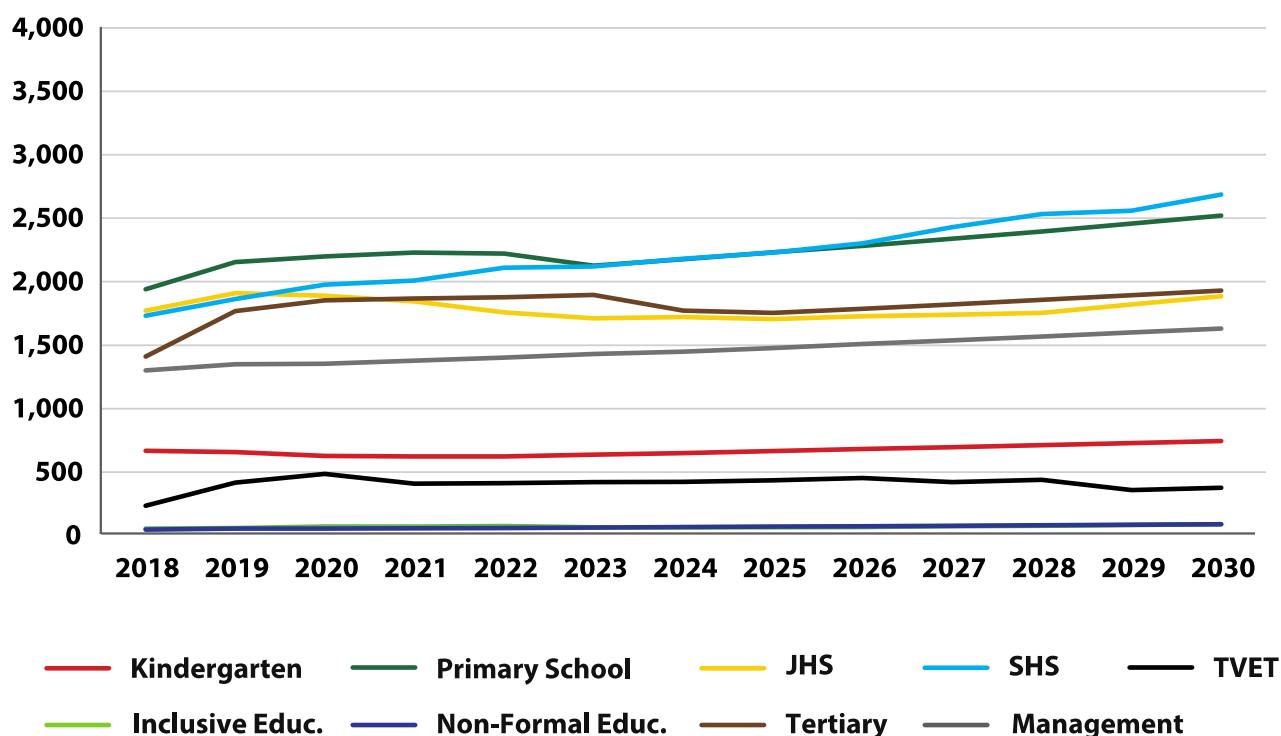
4.2.4 Projected costs by education sub-sector

The following graph shows the projected costs from 2018 to 2030 of each education sub-sector, including the costs of the ESP policy initiatives. The two largest sub-sectors are primary schooling and SHS, which experiences an average annual growth rate of 3.7% in cost. While the cost of the TVET sub-sector grows at an average annual rate of 4%, this is from a much lower base.

The primary education sub-sector sees a large growth in costs to 2022 due to the costs of renovating schools and classrooms, which is due to be completed in 2022.

JHS costs also decline slightly after 2022 due to the completion of the renovation projects.

Tertiary education costs are also affected by capital projects – the most significant of which is the construction of the University of the Environment and Sustainable Development, which will be built between 2019 and 2023.

Figure 5: Projected costs of education by sub-sector, including ESP policy costs, 2018–2030 (GHC millions)

Note: Tertiary and SHS costs are government expenditure only. They do not include IGF, which in 2016 accounted for nearly 45% of SHS expenditure and over 50% of tertiary expenditure.

Source: Perry *et al.* (2018)/Ghana ESP Cost Projection Model (2018)

The table below gives the projected costs by sub-sector, as well as the sub-sector costs as a percentage of the total education sector costs. Most sectors maintain their percentage share of the total costs over the projection period. JHS costs as a percentage of the total decrease from 19% to 16% between 2018 and 2030, and SHS costs are projected to increase from 19% to 22% of the total education costs.

Table 12: Projected costs of education by sub-sector, including ESP policy priorities, 2018–2030 (costs in GHC millions)

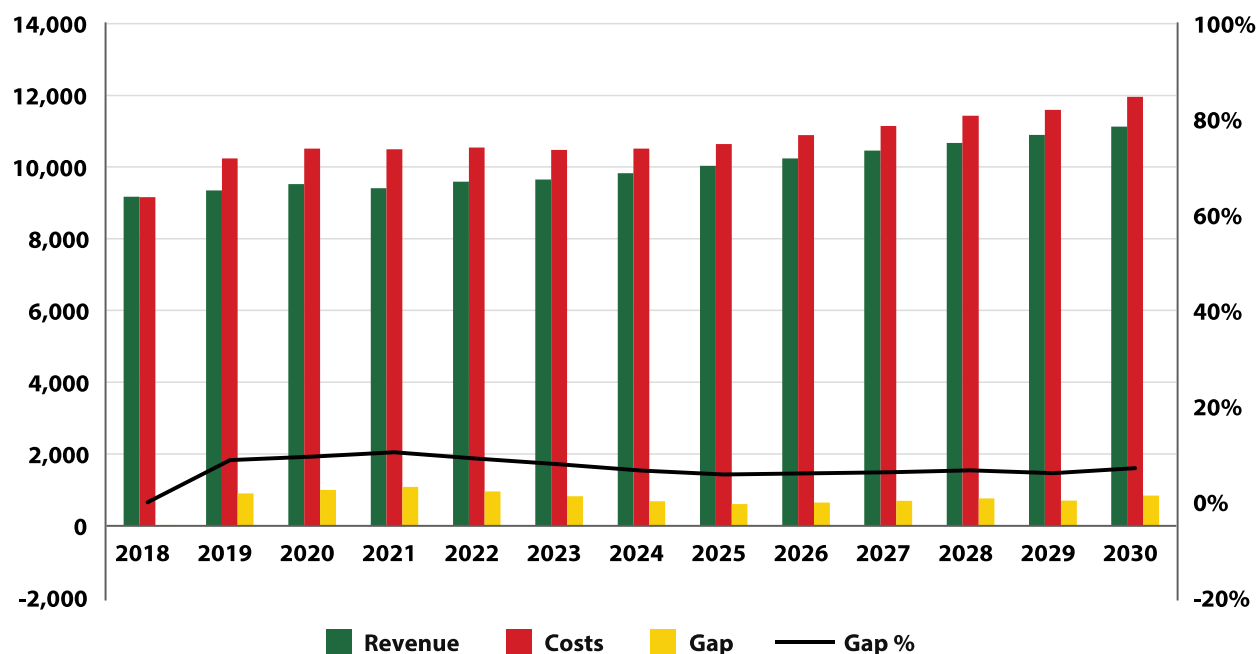
Sub-sector	2018	2019	2020	2021	2025	2030
Kindergarten	668	659	628	624	667	744
% of total	7%	6%	6%	6%	6%	6%
Primary	1 940	2 153	2 197	2 229	2 231	2 522
% of total	21.2%	21.0%	20.9%	21.2%	21.0%	21.1%
JHS	1 771	1 911	1 888	1 845	1 708	1 887
% of total	19%	19%	18%	18%	16%	16%
SHS	1 733	1 864	1 978	2 008	2 229	2 687
% of total	19%	18%	19%	19%	21%	22%
TVET	235	417	487	410	435	378
% of total	3%	4%	5%	4%	4%	3%
Inclusive education	56	60	71	71	65	88
% of total	1%	1%	1%	1%	1%	1%
NFE	47	54	56	58	70	90
% of total	1%	1%	1%	1%	1%	1%
Tertiary	1 410	1 769	1 854	1 868	1 753	1 932
% of total	15%	17%	18%	18%	16%	16%

4.2.5 Projected costs and resources provided to education, 2018–2030

This section shows the gap between the projected costs and resources provided to education, given an assumed annual growth of either of 2% or 3%.

Figure 6 below shows the total cost of the education sector, including ESP policy priorities. In this scenario the growth in the projected resources is estimated at 2% per annum. The percentage gap between the costs and the projected resources is 0% in 2018, and 9% in 2019 (when the majority of the ESP policies are implemented). The gap slowly begins to narrow to 6% in 2025 and levels off to between 6% and 7 % up to 2030.

Figure 6: Projected costs (including ESP policy costs) and resources (at 2% growth per annum) 2018–2030 (GHC millions)

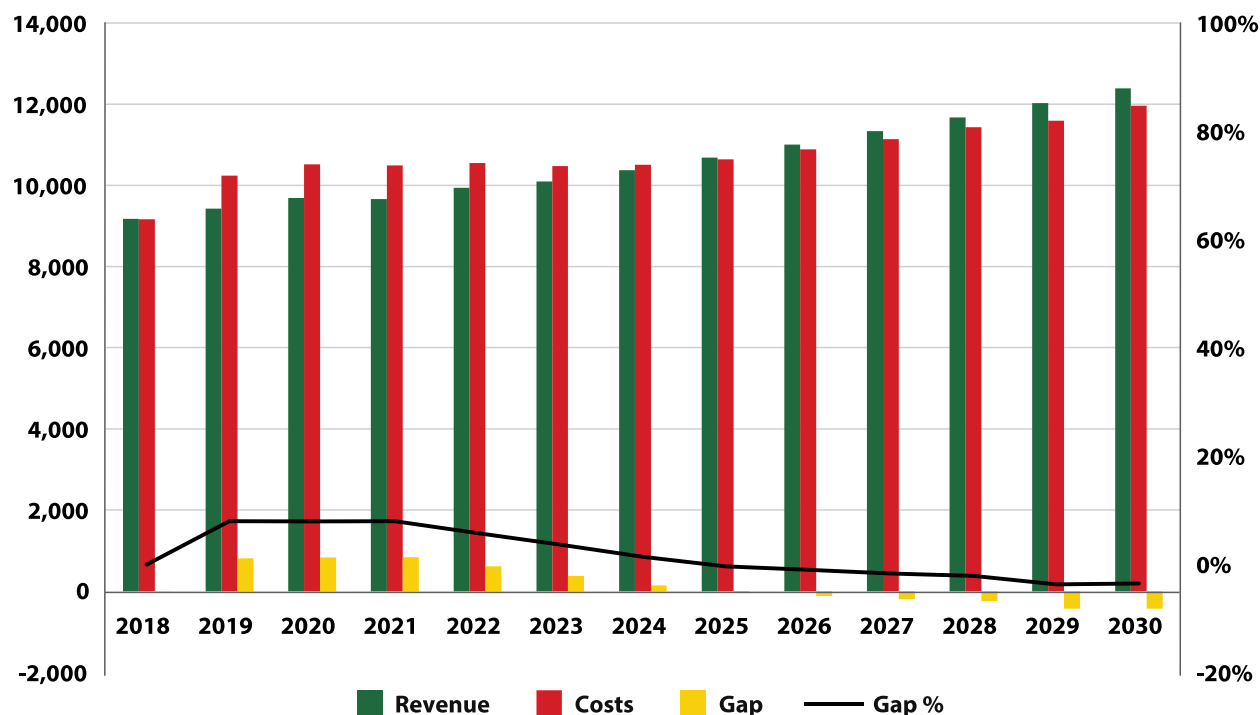


Note: Resources include government, donors, and GETFund, but excludes salary arrears and internally generated funds, which are primarily from student fees and levies.

Source: Perry *et al.* (2018)/Ghana ESP Cost Projection Model, 2018

Figure 7 below shows the total cost of the education sector, including ESP policy priorities. In this scenario the growth in the projected resources is estimated at 3% per annum. The percentage gap between the costs and the projected resources is 0% in 2018, and 8% in 2019 (when the majority of the ESP policies are implemented). The gap declines to 0% in 2025 and a surplus of 4% is evident in 2030.

Figure 7: Projected costs (including ESP policy costs) and resources (at 3% growth per annum), 2018–2030 (GHC millions)



Source: Perry *et al.* (2018)/Ghana ESP Cost Projection Model (2018)

4.3 External support for the ESP

Table 13 below provides a summary of the total costs, projected resources, and associated funding gap of the ESP financing projection. This is presented using both the assumption of education sector resources growing at 2% in real terms, as used in this chapter, as well as a higher 3% assumption. The 2% assumption is the headline projection because it is thought to be the most realistic, given that it may be premature to speculate that the economic upturn expected over the next few years will generate additional funds for the education sector. The 3% assumption is shown for comparison and, as expected, this significantly decreases the funding gap over time so that the resources and costs come into balance by 2022. The ambitious plans of the ESP in the near future keep the gap much higher before that. It should be noted that to realise these ambitious plans, it is essential that the sector have greater stability in the timely disbursement of funds: too many capital projects appear to be stalled due to delays in the GETFund disbursements, and delays in capitation and school grants will negatively affect the teaching and learning process.

Table 13: Projected costs and resources under 2% and 3% real-terms growth in education resources

	GHC billions	2018	2019	2020	2021	2025	2030
At 2% real-terms growth	Projected resources provided to education at 2% real-terms growth	9 174	9 344	9 519	9 405	10 030	11 119
	Total costs, including reforms, policies, and efficiency savings	9 164	10 239	10 514	10 492	10 684	12 387
	% funding gap	0%	9%	9%	10%	6%	7%
At 3% real-terms growth	Projected resources provided to education at 3% real-terms growth	9 174	9 424	9 684	9 659	9 897	11 474
	Total costs, including reforms, policies, and efficiency savings	9 164	10 239	10 514	10 492	10 639	11 960
	% funding gap	0%	8%	8%	8%	0%	-4%

Source: Perry *et al.* (2018)/Ghana ESP Cost Projection Model (2018)

As discussed, these projections include significant efficiency savings and the MOE is aware of the implementation effort required to realise these. Reductions in the repetition rate will be a function of improvements in the quality of schooling. Increasing the PTR will necessitate clear management of posts available at schools, a policy on the supply of teachers to small schools, a policy on the number of subjects offered in JHS and SHS, and strategies for providing education in sparsely populated areas.

The MOE will aim to raise additional funding for the sector and is actively pursuing various avenues to do this. There are already potential sources of funding from development partners which have not yet been finalised or committed but that are in the pipeline. These include the IDA-18 allocation, along with the associated GPE multiplier fund which Ghana can access. A detailed resource mobilisation strategy for the period 2018–2021 is provided in the ESMTDP but, in summary, it covers the following areas:

1. *Identifying additional GoG funding.* This could include exploring opportunities for increased allocation to the sector from the ABFA, as well as ensuring that additional GoG resources are allocated where the MOE is required to take on additional budget responsibilities: for instance, through the realignment of TVET. The MOE is also exploring options to frontload resources for the sector: for example, through the securitisation of the GETFund, which would enable future GETFund resources to be used in advance (for example to complete needed construction projects).
2. *Sustainable tertiary expansion.* To expand the tertiary sector without overburdening public resources, the MOE will explore opportunities to improve income through IGF, to facilitate an increase in the share of enrolment at private universities, and to improve access to and use of the Student Loan Trust Fund.

3. *Explore a Voluntary Education Fund.* The GoG 2018 budget statement proposed a pathway for sustaining education programmes through the establishment of a Voluntary Education Fund. This will give an opportunity for those in Ghana and across the diaspora to contribute to the education sector in Ghana.
4. *Adopting efficiency savings measures.* As explained in the cost projections, the MOE is committed to implementing strategies to improve the efficiency of service delivery and improve systems capacity to translate resources into results and, as such, make the system more efficient. Details of the efficiency measures have been explained under the relevant sub-sections.
5. *Pursuing development cooperation and partnerships.* The MOE has actively engaged with a number of international organisations, which have made commitments, or indications of willingness to make future commitments, to support the education sector over the medium to long term. These include both traditional development partners as well as the potential for more co-financing, public–private partnerships, engagement with philanthropic organisations, and supporting NGOs and CSOs in education to seek additional resources to support the implementation of the ESP.

5 Monitoring and Evaluation framework

This chapter provides a basis for the implementation of the ESP 2018–2030. The M&E framework provides guidance on how to ensure effective reporting to gauge the progress of the implementation of the ESP, in an effort to increase transparency and accountability. This section provides accountability and reporting structures and a risk analysis. First, it lays out the full set of indicators and targets for each sub-sector, with the KPIs highlighted in bold for each one. The SDG-specific indicators are also labelled; however, for some, targets and collection methods cannot be identified until standards and methodologies are agreed internationally. All of the appropriate indicators will be disaggregated by sex, location, wealth, and disability, when possible.

5.1 Basic education indicators

Indicator	Baseline 2016/17	Target						Data source	Collection method	Responsibility
		17/18	18/19	19/20	20/21	25/26	29/30			
KG GER	115.6	116	120	116	114	110	100	EMIS Annual Census	EMIS collects information through Annual Census	EMIS
KG NER	74.6	80	86	90	94	98	100	EMIS Annual Census	EMIS collects information through Annual Census	EMIS
Primary GER	111.4	116	116	116	116	113	100	EMIS Annual Census	EMIS collects information through Annual Census	EMIS
Primary NER	91.1	91.3	91.6	92.0	92.4	93.5	95	EMIS Annual Census	EMIS collects information through Annual Census	EMIS
JHS GER	86.8	89	90	91	92	96	100	EMIS Annual Census	EMIS collects information through Annual Census	EMIS
JHS NER	49.7	51	52	53	55	60	65	EMIS Annual Census	EMIS collects information through Annual Census	EMIS

Transition rate from P6 to JHS1	94.3	95	96	98	99	100	100	EMIS Annual Census	EMIS collects information through Annual Census	EMIS
SDG 4.2.1. Proportion of children under five years of age who are developmentally on track in health, learning, and psychosocial well-being, by sex								UNICEF	Multiple Indicator Cluster Survey (MICS)	EMIS
SDG 4.2.2. Participation rate in organised learning (one year before the official primary entry age), by sex								EMIS Annual Census	EMIS collects information through Annual Census	EMIS
GPI at KG	1.0	1.0	1.0	1.0	1.0	1.0	1.0	EMIS Annual Census	EMIS collects information through Annual Census	EMIS
GPI at primary	1.01	1.0	1.0	1.0	1.0	1.0	1.0	EMIS Annual Census	EMIS collects information through Annual Census	EMIS
GPI at JHS	0.98	0.99	0.99	1.0	1.0	1.0	1.0	EMIS Annual Census	EMIS collects information through Annual Census	EMIS
Primary school completion rate (P6 enrolment over P6 age-appropriate population)	100.8	100	100	100	100	100	100	EMIS Annual Census	EMIS collects information through Annual Census	EMIS
JHS completion rate (JHS3 enrolment over JHS3 age-appropriate population)	75.2	78	82	88	92	98	100	EMIS Annual Census	EMIS collects information through Annual Census	EMIS
% of P2 pupils achieving mastery in early reading test (EGRA)	2	N/A	N/A	8	N/A	20	40	National Education Assessment Unit (NEAU)	NEAU conducts assessment and writes report	NaCCA
% of P2 pupils achieving mastery in P2 numeracy	2	N/A	N/A	8	N/A	20	40	NEAU	NEAU conducts assessment and	NaCCA

test (EGMA)									writes report	
% of P4 pupils with proficiency in maths in NEA	22	N/A	N/A	30	N/A	38	50	NEAU	NEAU conducts assessment and writes report	NaCCA
% of P4 pupils with proficiency in English in NEA	37	N/A	N/A	45	N/A	53	65	NEAU	NEAU conducts assessment and writes report	NaCCA
% of P6 pupils with proficiency in English in NEA	36	N/A	N/A	44	N/A	52	65	NEAU	NEAU conducts assessment and writes report	NaCCA
% of P6 pupils with proficiency in maths in NEA	25	N/A	N/A	32	N/A	40	55	NEAU	NEAU conducts assessment and writes report	NaCCA
BECE performance: % pupils scoring more than 50% in all four core subjects	tbc	tbc	tbc	tbc	tbc	tbc	tbc	BECE results	West African Examination Council (WAEC) collects information from BECE exams	WAEC
% trained teachers in public KG	65.1	67	70	72	75	85	100	EMIS Annual Census	EMIS collects information through Annual Census	EMIS
% trained teachers in public primary	76.0	78	80	82	84	90	100	EMIS Annual Census	EMIS collects information through Annual Census	EMIS
% trained teachers in public JHS	88.1	90	92	94	96	98	100	EMIS Annual Census	EMIS collects information through Annual Census	EMIS
PTR at KG	30	32	34	35	35	35	35	EMIS Annual Census	EMIS collects information through Annual Census	EMIS
PTR at primary	29	31	33	35	35	35	35	EMIS Annual Census	EMIS collects information through Annual Census	EMIS
PTR at JHS	14	14	16	18	20	30	30	EMIS Annual Census	EMIS collects information	EMIS

									through Annual Census	
Pupil–trained teacher ratio at KG	63.5	60	55	45	40	35	35	EMIS Annual Census	EMIS collects information through Annual Census	EMIS
Pupil–trained teacher ratio at primary	52.4	50	45	40	38	35	35	EMIS Annual Census	EMIS collects information through Annual Census	EMIS
Pupil–trained teacher ratio at JHS	20.6	22	25	28	30	30	30	EMIS Annual Census	EMIS collects information through Annual Census	EMIS
% primary schools with computers and internet for teaching	4 (2015)	4	15	30	40	50	60	EMIS Annual Census	EMIS collects information through Annual Census	EMIS
% JHS with computers and internet for teaching	10 (2015)	10	30	50	60	70	80	EMIS Annual Census	EMIS collects information through Annual Census	EMIS
% of basic education schools with functioning SMCs	N/A	50	60	75	85	95	100	SRC	GES aggregates results from SRC	GES
% of schools with functioning PTAs	N/A	50	60	75	85	95	100	SRC	GES aggregates results from SRC	GES

% of District Education Offices (DEOs) that have M&E plans	N/A	60	70	80	90	95	100	GES report	GES conducts monitoring report	GES
SDG 4.a.1. Proportion of schools with access to: (a) electricity; (b) the internet for pedagogical purposes; (c) computers for pedagogical purposes; (d) adapted infrastructure and materials for students with disabilities; (e) basic drinking water; (f) single-sex basic sanitation facilities; and (g) basic hand-washing facilities (as per the water, sanitation, and hygiene (WASH) indicator definitions) ⁸								EMIS Annual Census	EMIS collects information through Annual Census	EMIS

5.2 Secondary education indicators

Indicator	Target							Data source	Collection method	Responsibility
	Baseline 2016/17	17/18	18/19	19/20	20/21	25/26	29/30			
SHS GER	50%	55%	58%	60%	63%	70%	83%	EMIS Annual Census	EMIS collects information through Annual Census	EMIS
SHS NER	26.5%	29%	32%	34%	37%	45%	50%	EMIS Annual Census	EMIS collects information through Annual Census	EMIS

⁸ Most of these sub-indicators are under development internationally, in terms of agreed standards and methodology.

Transition rate from JHS ₃ to SHS ₁	67.8%	75%	80%	85%	90%	93%	95%	EMIS Annual Census	EMIS collects information through Annual Census	EMIS
SHS retention rate ⁹	92%	94%	96%	97%	97%	97%	98%	EMIS Annual Census	EMIS collects information through Annual Census	EMIS
% of CSSPS Category 3 schools admitting at least 30% of students from public JHS	N/A	tbc	100%	100%	100%	100%	100%	Free SHS secretariat	Free SHS tracks data through integrated CSSPS	Free SHS
% of students enrolled in Category 3 schools from public JHS	N/A	45%	46%	47%	48%	53%	58%	Free SHS secretariat	Free SHS tracks data through integrated CSSPS	Free SHS
% students (boys and girls) from the poorest two quintiles/deprived areas accessing SHS	N/A	N/A	N/A	N/A	50	N/A	80	Demographic and Health Survey (DHS)	GSS produces report on DHS and makes data available	Planning, Budgeting, Monitoring and Evaluation (PBME) Division of the MOE reports on GSS report or further processes data
Completion rates of children from Quintile 1 at the secondary level	13.9% (DHS 2014)	N/A	N/A	N/A	30%	N/A	60%	DHS or Population and Housing Census (PHC)	GSS writes report and PBME pulls relevant data	PBME

⁹ This is defined as the proportion of a cohort starting SHS who stay on and complete SHS.

SHS GPI	0.96			0.97			0.97			0.98			0.99			1.0			1.0			EMIS Annual Census	EMIS collects information through Annual Census	EMIS
PTR ratio	21			23			24			25			25			25			25			EMIS Annual Census	EMIS collects information through Annual Census	EMIS
% teachers trained	90%			90%			91%			92%			93%			95%			97%			EMIS Annual Census	EMIS collects information through Annual Census	EMIS
Textbooks per student – English	0.51			0.55			0.60			0.65			0.70			0.85			1.0			EMIS Annual Census	EMIS collects information through Annual Census	EMIS
Student–classroom ratio	48			45			42			40			38			33			28			EMIS Annual Census	EMIS collects information through Annual Census	EMIS
% SHS with computers and internet	NA			20			30			40			50			65			80			EMIS Annual Census	EMIS collects information through Annual Census	EMIS
% of SHS students enrolled in elective science programme	11.7			13			18			25			30			35			40			EMIS Annual Census	EMIS collects information through Annual Census	EMIS
Proportion of WASSCE candidates who qualify for tertiary institutions	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	WASSCE results	WAEC collects information from WASSCE examinations	WAEC
	23	26	20	25	28	22	28	30	25	31	33	28	34	36	32	42	43	41	50	50	50			

Proportion of WASSCE candidates achieving pass in core subjects (A1 to C6)	English	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	WASSCE results	WAEC collects information from WASSCE examinations	WAEC
		53	53	53	55	55	55	57	57	57	59	59	59	62	62	62	68	68	68	75	75	75			
	Maths	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F			
		34	38	29	35	40	31	37	42	34	40	44	37	43	46	41	50	51	49	57	57	57			
	Int. Science	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F			
		49	52	45	51	54	47	53	56	49	55	58	52	58	60	55	65	67	63	70	71	69			
	Social studies	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F			
		55	57	52	57	59	54	59	61	56	61	63	59	64	65	63	71	71	71	78	78	78			
% of heads of public SHS who have signed performance contracts with GES Director General		20%			50%			85%			95%			100%			100%			100%			GES report	GES produces report	GES
SDG 4.a.1 Proportion of schools with access to: (a) electricity; (b) the internet for pedagogical purposes; (c) computers for pedagogical purposes; (d) adapted infrastructure and materials for students with disabilities; (e) basic drinking water; (f) single-sex basic sanitation facilities; and (g) basic hand-washing facilities (as per the WASH indicator definitions) ¹⁰																							EMIS Annual Census	EMIS collects information through Annual Census	EMIS

5.3 TVET indicators

Indicator	Target							Data source	Collection method	Responsibility
	Baseline 2016/17	17/ 18	18/ 19	19/ 20	20/ 21	25/ 26	29/ 30			
Number of MOE/GES TVIs	47	50	55	70	80	90	100	MOE/E MIS	Data collected from GES/TVET Service	EMIS
Enrolment in MOE/GES TVIs	45,215	65,000	70,000	80,000	90,000	100,000	120,000	MOE/E	Data collected from TVIs	TVET Service

¹⁰ Most of these sub-indicators are under development in terms of agreed standards and methodology.

								MIS		
% of BECE (JHS) candidates selecting TVIs for further education and training	3-7	5	10	15	20	25	30	MOE/E MIS	Data collected from CSSPS	EMIS
% MOE/GES TVIs with smart classrooms, workshops, functional laboratories, and libraries	5	20	30	40	50	80	100	MOE/E MIS	Data collected from TVIs	TVET Service
% of TVIs using CBT methodology	30	40	50	70	80	90	100	COTVET	Data collected from TVIs	TVET Service
Overall % of STEM-based programmes in TVIs	70	80	85	90	90	90	90	MOE/E MIS	Data collected from TVIs	TVET Service
% TVIs with disability-friendly facilities	20	30	40	50	60	80	100	MOE/E MIS	Data collected from TVIs	EMIS
% female enrolment in MOE/GES TVIs	25	28	30	35	40	45	50	MOE/E MIS	Data collected from TVIs	TVET Service
Overall PTR in MOE/GES TVIs	19	19	20	22	20	18	15	MOE/E MIS	Data collected from TVIs	TVET Service
% of teachers undergoing annual internships in industry	N/A	10	20	25	30	40	50	COTVET	Data collected from TVIs	COTVET
% of TVI leavers who are in productive employment two years after graduation	N/A	50	60	70	75	80	90	COTVET	Tracer study	COTVET

5.4 NFE indicators

Indicator	Target							Data source	Collection method	Responsibility
	Baseline 2016/17	17/18	18/19	19/20	20/21	25/26	29/30			
Number of adult literacy education classes	3,000	3,200	3,500	4,000	4,500	7,500	10,000	EMIS	Collected from NFED and reported to EMIS	EMIS
Enrolment in face-to-face adult literacy programmes	100,000	100,000	110,000	110,000	120,000	200,000	300,000	EMIS	Collected from NFED and reported to EMIS	EMIS
Enrolment in newly created NFE programmes	N/A	N/A	N/A	N/A	N/A	100,000	300,000	EMIS	Collected from NFED and reported to EMIS	EMIS

% rural enrolment in face-to-face adult literacy programmes	N/A		N/A	20%	22%	24%	30%		40%		EMIS	Collected from NFED and reported to EMIS	EMIS
Literacy rate among 15–24-year-olds in three northern regions of Ghana	N	63%	N/A	N/A	N/A	N/A	N	73%	N	85%	DHS/PHC	Report from GSS on DHS/PHC	PBME collates information and reports
	UE	64%					UE	74%	UE	85%			
	UW	68%					UW	78%	UW	85%			
Enrolment in distance learning courses (including literacy app)	N/A		N/A	N/A	N/A	N/A	1,000		4,000		EMIS	Collected from NFED and reported to EMIS	EMIS
% of NFE facilitators trained	N/A		N/A	40%	50%	60%	100%		100%		EMIS	Collected from NFED and reported to EMIS	EMIS
% learners reporting they have sustainable skills	N/A		N/A	N/A	N/A	N/A	60%		80%		NFED	Surveys from NFED	NFED
Number of new NFE programmes developed with textbook/content material (aggregate from baseline)	N/A		N/A	N/A	2	3	6		10		NFED	Report from NFED	NFED
Number of annual monitoring trips conducted	1		1	2	3	4	4		4		NFED	Monitoring reports from NFED	NFED
Number of surveys conducted on NFE needs (aggregate from baseline)	0		0	1	2	3	5		8		NFED	Survey reports from NFED	NFED
Number of new NFE indicators being reported (aggregate from baseline)	0		0	0	0	0	5		10		EMIS	Collected from NFED and reported to EMIS	EMIS
Number of new learning centres built	0		0	15	30	40	110		216		NFED report	NFED writes report	NFED
Proportion of NFE graduates who access skills development opportunities	N/A		N/A	N/A	5%	10%	20%		30%		NFED	Survey from NFED	NFED

SDG 4.3.1. Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex ¹¹								EMIS Annual Census	Participation tracked by NFED and submitted to and collated by EMIS	EMIS/NFED
SDG 4.4.1 Proportion of youth and adults with ICT skills, by type of skill								EMIS Annual Census	Annual Census	EMIS
SDG 4.6.1 Proportion 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								Relevant learning assessment once indicator defined internationally	WAEC collects learning assessment results	WAEC

¹¹ These last three indicators are under development, in terms of agreed standards and methodology.

5.5 Inclusive and special education indicators

Indicator	Target							Data source	Collection method	Responsibility
	Baseline 2016/17	17/18	18/19	19/20	20/21	25/26	29/30			
Enrolment in special education schools	6,689	7,000	7,500	8,000	8,500	13,000	20,000	EMIS Annual Census	EMIS collects information through the Annual Census	EMIS
Number of integrated SHS	8	8	9	10	11	15	25	EMIS Annual Census	EMIS collects information through the Annual Census	EMIS
% enrolment of SEN learners in public integrated basic schools	0.4%	0.6%	0.8%	0.9%	1%	1.5%	2%	EMIS Annual Census	EMIS collects information through the Annual Census	EMIS
% enrolment of SEN learners in public integrated SHS	0.2%	0.4%	0.6%	0.8%	1%	1.5%	2%	EMIS Annual Census	EMIS collects information through the Annual Census	EMIS
Number of learners with SEN detected annually	N/A	N/A	500	1,000	1,500	3,000	5,000	EMIS Annual Census	EMIS collects information through the Annual Census	EMIS
% of teachers in public basic schools trained in effectively teaching learners with SEN	N/A	N/A	20%	30%	40%	60%	80%	EMIS Annual Census	EMIS collects information through the Annual Census	EMIS
% of teachers in public SHS trained in effectively teaching learners with SEN	N/A	N/A	20%	30%	40%	60%	80%	EMIS Annual Census	EMIS collects information through the Annual Census	EMIS
% of integrated basic public schools provided with specialised TLMs for SEN learners	N/A	N/A	10%	20%	35%	55%	80%	EMIS Annual Census	EMIS collects information through the Annual Census	EMIS
% of integrated public SHS provided with specialised TLMs for SEN learners	N/A	N/A	10%	20%	35%	55%	80%	EMIS Annual Census	EMIS collects information through the Annual Census	EMIS

% of learners with SEN progressing from basic to secondary education	N/A	N/A	30%	35%	40%	55%	80%	EMIS Annual Census	EMIS collects information through the Annual Census	EMIS
Status of mainstreaming inclusive education, measured by reference to milestones	N/A	Pre and in-service teacher training includes SEN	Inclusive curriculum with established rules of flexibility to meet individual learning needs	Established rules for accessibility in the construction of buildings and equipment	Established procedures for early identification and assessment of SEN	Coordinated and coherent data collection and monitoring systems	Assessments which are able to respond to children with SEN	GES ISE	GES ISE division to report to MOE	GES ISE
Proportion of special schools/regional assessment centres functioning as resource centres	0	tbc	tbc	tbc	tbc	tbc	tbc	GES	Monitoring by DEOs, reporting to GES headquarters	GES
Proportion of basic schools with mild and moderate disability-friendly infrastructure (ramps and/or hand-rails)	8%	9%	12%	15%	20%	30%	50%	EMIS Annual Census	EMIS collects information through the Annual Census	EMIS
Proportion of schools where children with SEN are equipped with appropriate assistive devices	tbc	tbc	tbc	tbc	tbc	tbc	tbc	EMIS Annual Census	EMIS collects information through the Annual Census	EMIS

5.6 Tertiary education indicators

Indicator	Target							Data source	Collection method	Responsibility
	Baseline 2016/17	17/18	18/19	19/20	20/21	25/26	29/30			
Tertiary GER	15.95	16.97	17.99	20	25	30	40	Enrolment data of TEIs	NCTE to request and collate enrolment data from TEIs annually	NCTE
Science to humanities enrolment ratio	29:71	33:67	37:63	45:55	50:50	55:45	60:40	Enrolment data of TEIs	NCTE to request and collate enrolment data from TEIs annually	NCTE
Female enrolment as a percentage of total enrolment (%)	40.80	41.48	42.16	42.84	43.52	50	50	Enrolment data of TEIs	NCTE to request and collate enrolment data from TEIs annually	NCTE
% of qualified disadvantaged (disabled and poor socioeconomic background) applicants admitted	N/A	50	75	100	100	100	100	Enrolment data of TEIs	NCTE to request and collate enrolment data from TEIs annually	NCTE
% students in the two poorest quintiles/ deprived areas accessing tertiary education	N/A	N/A	N/A	N/A	20	N/A	35	DHS	GSS produces report on DHS and makes data available	PBME reports on GSS report or further processes data

% of institutions with quality assurance units, policies, and processes in place and operational	N/A	50	75	100	100	100	100	NAB reports on TEIs	NCTE to request data from NAB	NCTE
% of full-time university lecturers with PhD	37	39	42	45	50	65	80	Staff data of universities	NCTE to request for annual reports of universities	NCTE
Graduation rates	N/A	70	70	75	80	85	90	Graduation data of TEIs	NCTE to request graduation data from TEIs	NCTE
Distribution of graduates by ISCED5 fields of education from 2018	N/A	Commence collecting data by this method and ongoing	Data collection and analysis	Data collection and analysis	Data collection and analysis	Data collection and analysis	Data collection and analysis	Graduation data of TEIs	NCTE to request and collate graduation data from TEIs annually	NCTE
National research priority areas agreed with all stakeholders	N/A	Completed	Implement research in priority areas	Implement research in priority areas	Implement research in priority areas	Implement research in priority areas	Implement research in priority areas	NCTE research agenda	NCTE creates research agenda	NCTE
Number of publications per academic staff per annum	0.5	0.65	0.85	1	1.5	2	2	Research publication data of TEIs	NCTE to request for research reports from TEIs	NCTE
International students as percentage of total enrolments	0.5	1.0	1.5	2.5	4.0	6.0	10.0	Enrolment data of TEIs	NCTE to request enrolment data from TEIs	NCTE

International faculty as a percentage of total faculty	0.5	1.0	1.5	2	2.5	3	5	Staff data of TEIs	NCTE to request staff data from TEIs	NCTE
% of polytechnic or technical university teachers with industry experience	20	30	40	50	60	70	80	Staff data of TEIs	NCTE to request staff data from TEIs	NCTE
New Acts for NCTE and NAB	Old Acts	New Acts passed	Implement-ation of new Acts	Implementati-on of new Acts	Implement-ation of new Acts	Implement-ation of new Acts	Implement-ation of new Acts	Implement-ation of new Acts	Implement-ation of new Acts	NCTE, NAB
% of newly qualified teachers meeting NTS for licensing	N/A	20	30	40	70	85	95	Data from COEs	NAB collects and reports data from COEs	NAB
% of ITEIs implementing curriculums aligned with the NTS and NTECF	N/A	40	60	80	85	95	100	Monitoring reports of COEs	NAB conducts monitoring and writes report	NAB
% of University COEs meeting NAB accreditation criteria	N/A	20	40	60	75	88	100	Monitoring reports of COEs	NAB conducts monitoring and writes report	NAB

5.7 Education management indicators

Indicator	Target							Data source	Collection method	Responsibility
	Baseline 2016/17	17/18	18/19	19/20	20/21	25/26	29/30			
% teacher absenteeism	19 (2014)	19	17	15	10	5	3	NIB reports	GES collects data from NIB	NIB
% teacher time-on-task	N/A	N/A	40	50	70	80	85	NIB reports	GES collects data from NIB	NIB
% of districts with the appropriate PTR at primary,	N/A	N/A	10%	50%	100%	100%	100%	GES human resources/EMIS	GES human resources collects	GES human resources

based on assessed need									from teacher deployment system linked to EMIS	
% of teachers who have undergone NTC-approved in-service training/CPD	N/A	10	20	30	40	70	90	NTC data	GES collects data from NTC	GES human resources
% of head teachers who have undergone NTC-approved school leadership training	N/A	N/A	N/A	5%	10%	25%	40%	NTC data	GES collects data from NTC	GES human resources
Number of research studies coordinated and reported by MOE	NA	NA	2	4	6	10	10	Research Unit of MOE	PBME collects data from Research Unit	PMBE
% of district budget mobilised locally at the district level	N/A	5	10	15	20	25	30	DEOs' reports	FA receives data from DOEs	Finance and Administration
% of private schools registered	40	50	60	70	80	100	100	NIB/EMIS data	GES collects data from NIB/EMIS	GES
% of districts with ADEOPs	N/A	30	50	70	80	100	100	DEOs	GES collates ADEOPs	GES
% basic school pupils in the last two poorest quintiles/deprived areas receiving social intervention support	N/A	N/A	N/A	N/A	40	N/A	70	DHS	GSS produces report on DHS and makes data available	PBME reports on GSS report or further processes data
% of MMDAs that are fully decentralised	N/A	N/A	30	50	60	80	100	MMDAs' reports	PBME collects data from MMDAs	PBME
SDG 4.7.1. 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 ¹²										

¹² These sub-indicators are under development, in terms of agreed standards and methodology.

First, it is necessary to lay out several critical assumptions that underpin the M&E framework. While these assumptions have been addressed in the implementation frameworks of the ESP 2018–2030, as they underlie the development of an effective M&E system, particular attention should be paid to making sure they are appropriately set up. A comprehensive Monitoring, Evaluation, and Learning Capacity Development plan will be developed to mitigate the risk that some or all of these assumptions may pose. The assumptions are as follows:

- Adequate planning procedures and documentation will be in place at each level of administration and operation.
- Adequate capacity of agencies and departments in MOE-GES, including DEOs and Regional Education Offices (REOs), will be available to carry out M&E.
- Adequate and quality data collection, analysis, and reporting will take place at all levels.
- Adequate IT infrastructure will be in place for M&E.
- Adequate financial, material, and human resources will be available on time to implement M&E activities at all levels.
- Monitoring teams at various levels in the education sector will support the day-to-day monitoring activities of the agencies, departments, divisions, regions, and districts.
- Means of transportation for M&E activities will be available at all levels of implementation of the ESP.
- A reliable and regularly updated website will widely publicise M&E results.
- All the agencies, departments, divisions, regions, and districts will have designated and qualified M&E focal persons and working groups to carry out M&E activities.

5.8 Accountability and reporting structures

5.8.1 Overview

Ultimate responsibility for meeting the targets outlined in the ESP 2018–2030 rests with the MOE leadership. This specifically includes the Minister of Education, the Deputy Ministers of Education, and the Chief Director. However, the implementation and reporting structures are not the sole responsibility of any one particular agency of the MOE, and a sector-wide approach is necessary.

In general, a decentralised implementation and reporting structure is employed, where schools report to districts, who report to regions, and finally to headquarters. In terms of implementation, after the creation of the ESP, the MOE creates four-yearly ESMTDPs according to guidelines outlined by the NDPC. Based on these, districts create ADEOPs to outline their activities and targets on an annual basis. Schools then create School Performance Improvement Plans (SPIPs) for basic schools or SPPPs for secondary schools, outlining their plans for school improvement.

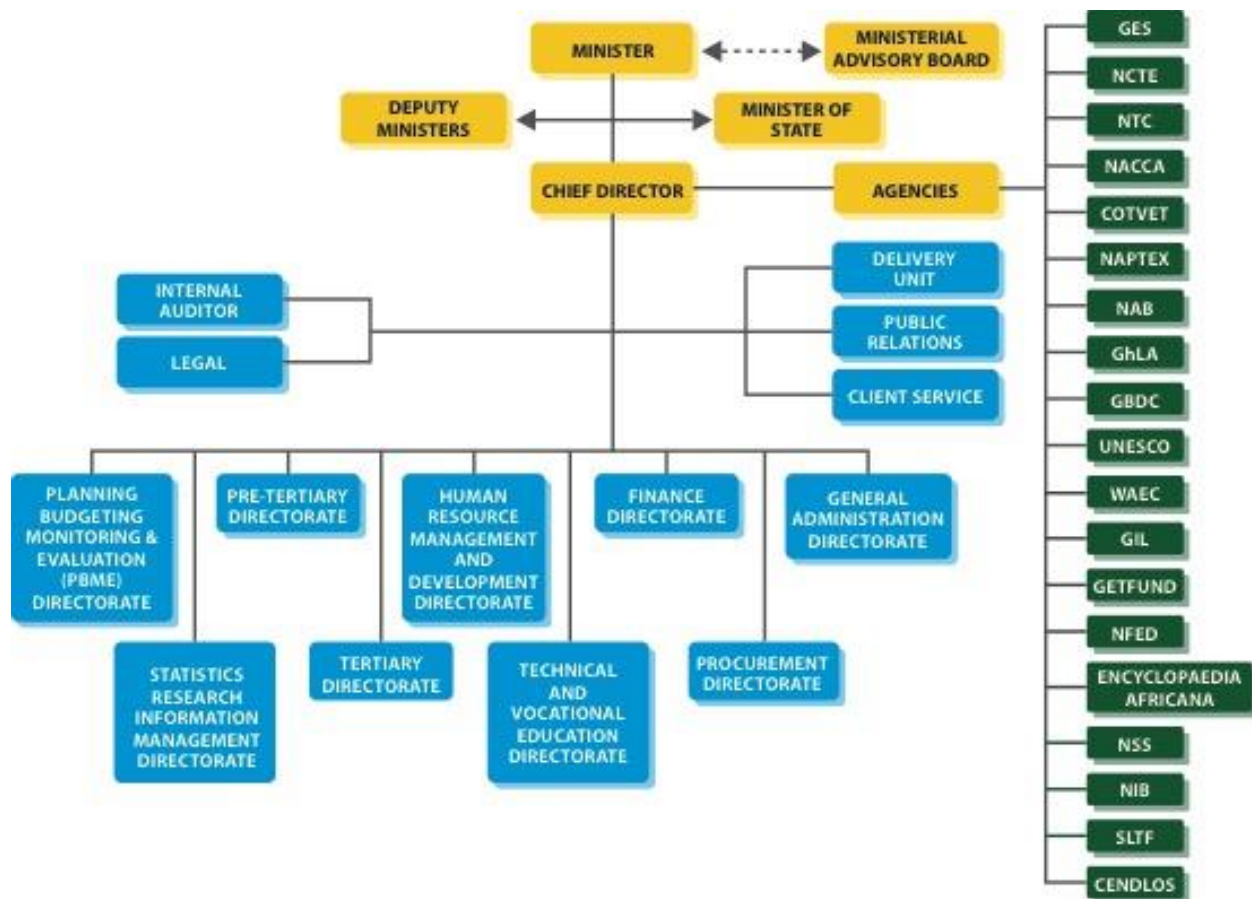
In terms of monitoring and reporting, districts collate reports from schools, which are then collated at the regional level as regional quarterly performance reports. These are sent to the GES national level to be collated into national quarterly performance reports on pre-tertiary

education. This is followed by a performance review conference organised annually by the MOE to share performance information with key education stakeholders at the district, regional, and national levels.

5.8.2 Institutions involved

A number of institutions will be involved in the M&E framework for the ESP 2018–2030. The primary sectoral focal point is the MOE and its agencies and units, as outlined in **Error! Reference source not found.**

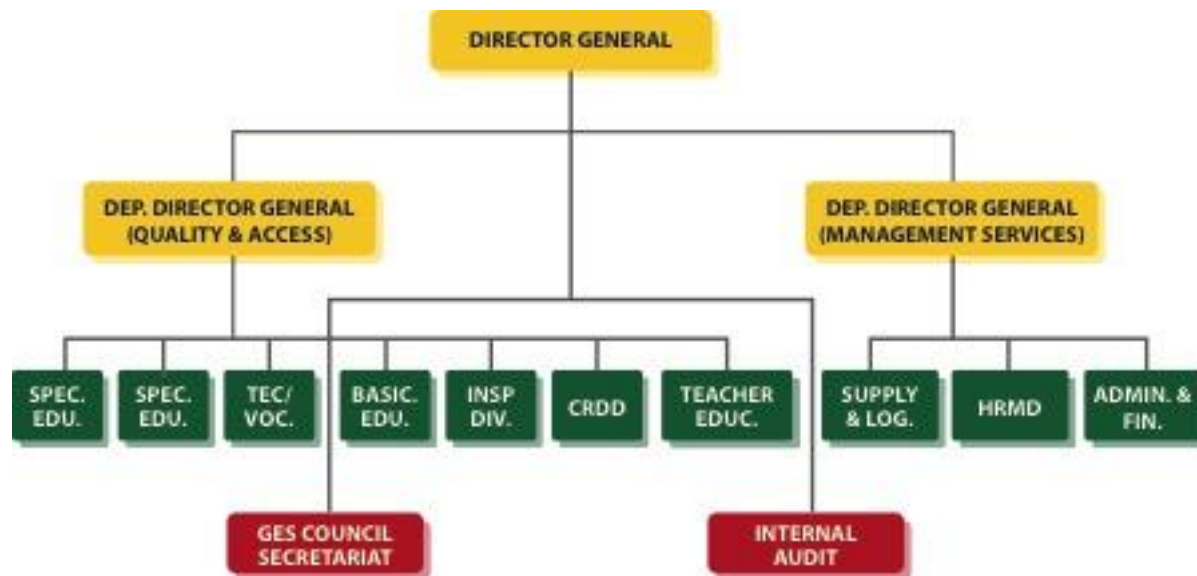
Figure 8: Organogram of the MOE as at 2018



At the pre-tertiary levels, the GES, with its decentralised regional and district directorates, has the mandate to ensure and coordinate implementation of all policies pertaining to basic education and second cycle education. An organogram for the GES is given in Figure 9**Error! Reference source not found.** These bodies will play an important role in the implementation and M&E of the ESP. They constitute the sectoral focal points for the provision of data/information on a timely basis on chosen indicators and for the preparation of timely reports. At the TVET level, COTVET and the proposed TVET Service plays a coordination role. At the tertiary level, the NCTE is the key coordination agency. NFE is directed by the NFED, which will soon be converted into an agency. Other groups that will play key roles include non-

governmental bodies, community-based organisations, CSOs, development partners, and parents.

Figure 9: Organogram of the GES



5.8.3 Data collection

Monitoring of the ESP 2018–2030 will rely on data collection primarily from EMIS but also from a host of other sources, including WAEC, NEAU, NCTE, COTVET, national surveys such as the DHS and PHC, administrative data, and other independent studies. The EMIS unit of the MOE collects data from November to March of every year, and uses the period from April to May to process data and compile reports. Key indicators are made available to the public electronically in June, and the Education Sector Performance Report (ESPR) compiles the data into a report in July of every year. This data cycle feeds directly into the budget cycle. Sector ceilings are released in mid-June of every year by MOFEP, at which point the MOE must begin costing out programmes and activities according to the priority areas. Ghana uses programme-based budgeting, which links planned expenditures to results and improved service delivery. The MOE submits its budget request in July of every year, and after budget hearings the budget is finalised before the end of December.

Examination data are also available on an annual basis and feed into EMIS reporting. EGRA/EGMA testing has taken place twice in Ghana: in 2013 and 2015. National Education Assessments are administered every two years, with the latest one in 2016. Aside from data processed by the MOE, the PHC is conducted every 10 years with the next PHC expected in 2020. Two DHS have been conducted in Ghana: in 2008 and 2012.

5.8.4 Reporting structures

Reporting structures at the tertiary and pre-tertiary levels diverge. At the tertiary level, the NCTE is the key body responsible for reporting on all indicators and outcomes. The Research, Planning and Policy Development Department of the NCTE sends out a template to institutions

in January of every year to provide data for the ongoing academic year. Data are then collated by the NCTE at the end of the academic year.

The reporting structure for pre-tertiary is given below and will be strengthened through a School Management Division that is being set up by the GES to boost accountability in the system.

5.8.4.1 School level

At the end of the first and third term of every academic year, basic schools receive statistics on their school performance in the form of an SRC, which they share with the community through a School Performance Appraisal Meeting. The SRC is also displayed on the school noticeboard. The information from the SRC is then used to prepare SPIPs, which are created in tandem with the SMC and the PTA and are a prerequisite to receiving the capitation grant. These are then approved by the District Director of Education (DDE). Once approved, schools receive funds to carry out activities outlined in their SPIPs. These funds are received from the DEOs. Head teachers monitor the implementation of the SPIP to ensure the achievement of targets. At the secondary level, schools under the SEIP have been receiving funds for their SPPPs, which are signed off by the GES headquarters and by the REOs.

In terms of reporting, the school is also the source of primary data collection for the EMIS Annual Census. Head teachers report on EMIS data for their school, and this is then submitted to circuit supervisors for verification and accuracy. Heads of basic schools are also responsible for submitting information that is used to generate the SRC in the first and third term of every academic year. A pilot has taken place of a mobile SRC and national roll-out is being considered. This system will provide real-time information on the school. At the secondary level, a school mapping portal is in place that collects data once a year on all SHS in the country and is used to generate key statistics on each SHS.

5.8.4.2 District level

At the district level, District Directors/circuit supervisors are responsible for ensuring that SPIPs/SPPPs have been approved and are being implemented and reported on. They carry out routine monitoring and report on the performance of schools, collating reports into circuit reports. DEOs are responsible for incorporating Circuit Supervisor reports into district quarterly and annual performance reports.

The DEO also monitors and tracks the progress of the ADEOP, as well as collating school reporting on EMIS and uploading this into EMIS software.

5.8.4.3 Regional level

REOs have oversight monitoring responsibility for the district, to ensure that DEOs are performing their monitoring activities as planned. DEOs will provide quarterly and annual reports on KPIs of the ESP. The REOs coordinate activities of the districts to ensure that district activities are contributing to the larger education goals of the region and that implementation is on track. They ensure that appropriate intervention strategies are put in place to support districts encountering difficulties in achieving performance targets. From the monitoring activities, REOs

prepare quarterly and annual regional ESPRs which are sent to the Director General of GES, as well as carrying out data quality assurance.

5.8.4.4 GES headquarters level

GES headquarters has oversight responsibility for the REOs and monitors them to ensure compliance with monitoring standards. GES produces unified quarterly and annual ESPRs from regional quarterly and annual performance reports. The different departments and units of GES, such as special education, the Girls Education Unit, and ICT, will provide information KPIs that relate to their units.

5.8.4.5 MOE

At the MOE level, the Planning, Budget, Monitoring and Evaluation (PBME) Division will track and measure progress toward attainment of the ESP goals. This monitoring will rely heavily on EMIS data. Once a year, an ESPR is produced to document this progress, and the National Education Sector Annual Review (NESAR), an annual conference organised by the MOE, provides an opportunity for PBME to disseminate progress made over the past year with stakeholders of education. An Aide Memoire is signed between the MOE and development partners at the end of NESAR to further inform progress on the ESP. All of these activities will be expanded in future to include the full extent of reporting on the ESP.

Table 14: Summary of performance management tasks and responsibilities

TASK	RESPONSIBILITY	
	PRIMARY SOURCE	SECONDARY SOURCE
Data collection	Head teachers, circuit supervisors, District EMIS Unit, heads of SHS, COTVET, tertiary institutions, NCTE, NFED	EMIS, BED, Division, NCTE, TVET Service, SPED
Review of performance information	M&E officers, DDEs, Regional Directors of Education (RDEs)	Director General of GES, Director BED, Special Education Division, PBME, NCTE, Director General TVET Service
Data quality assurance	DEOs, REOs, GES headquarters, heads of tertiary institutions, COTVET	PBME, NAB, NCTE
Data analysis	DEOs, REOs, GES headquarters (Basic Education Division (BED), Girls' Education Unit, School Health Education Unit, Special Education Unit, Finance and Administration Division), NCTE, COTVET, NFED	Head teachers, DDE, RDEs, Director General GES, PBME, Statistics, Research, Information Management (SRIM), and Public Relations (division of the MOD, TVET Service)

Preparation of reports	DEOs, REOs, GES HQ (BED), Girls' Education Unit, School Health Education Unit, Special Education Division, Finance and Administration Division), NCTE, COTVET, NFED	PBME, SRIM
Performance review meetings	Head teachers, DDEs, RDEs, Director General GES, NESAR, Director General TVET Service, NCTE	Chief Director MOE, PBME Director, SRIM Director
Use of performance information	Head teachers, DDE, RDEs, Director General GES, NCTE, COTVET	Head teachers, DDE, RDEs, Director General GES, NFED, SPED, heads of tertiary institutions

Source: Adapted from Partnership for Education: Evaluating Systems (2015) 'Revised ESP performance monitoring processes, definitions and indicators', unpublished paper.

5.9 Key tools for effective implementation and M&E

The following are key tools to ensure effective implementation and M&E of the ESP:

- **ESMTDP:** This is a four-year rolling plan prepared by MOE for the implementation of the ESP and is designed to coincide with the budget cycle and the Medium-Term Expenditure Framework of GoG.
- **Annual work plans:** All departments and specialised units under the MOE will develop annual work plans driven by strategies and goals of the ESMTDP 2018–2021.
- **ADEOPs:** DEOs of GES will develop ADEOPs contributing directly to the ESMTDP.
- **EMIS data:** The availability of reliable and comprehensive data from the EMIS is critical to enable effective M&E of the ESMTDP. The EMIS conducts an annual school census to gather national and sub-national data to track the progress of key indicators.
- **Other sources of data:** data from other sources such as WAEC, NEAU, NCTE, COTVET, etc., as well as surveys conducted by the GSS, such as the DHS and PHC, will also be used.

The ESP will be reviewed at mid-term in 2024 to ensure that it is still relevant and responsive to the needs of Ghana's education system.

In addition, the MOE will be primarily responsible for conducting research and evaluation to generate evidence and objective data to enhance management decisions and to determine the effect of various interventional strategies implemented to support the ESP. This research and these evaluations may be carried out internally by staff of the MOE or they may be contracted to universities and research institutions within the country to address key policy issues. The research and evaluation agenda will aim to promote organisational learning in the Ministry and will help to harness the expertise of local research institutions to test hypotheses to improve the quality of learning outcomes, equity, and management. The MOE already has research agendas established at the basic and secondary levels that will continue creating a knowledge

base to aid strategic decision-making and planning by the MOE. The research agenda has been captured as part of the implementation sub-sector policy objectives of the ESP 2018–2030.

The coordination of all research and monitoring activities will be the function of the SRIM division of the MOE, with support from the PBME division. It is expected that all the agencies of the MOE, including NIB, NTC, NaCCA, NAB and NCTE, will periodically conduct external evaluations on policy questions related to their mandate.

5.9.1 Links with other Service Delivery Indicators

The focus of the Service Delivery Indicators (SDI) initiative is on quality. This initiative has been designed to link with other research studies in education and health to capture the inputs in policy and institutional environment, as well as education or health outcomes.

The following are the surveys by sector linked to SDI:

- The Southern and Eastern African Consortium for Monitoring Education Quality ([SACMEQ](#)).
- Programme for the Analysis of Education Systems ([PASEC](#)). (These are standardised surveys that primarily focus on education outcomes.)
- SDI also links to the World Bank’s Systems Approach for Better Education Results ([SABER](#)) initiative that focuses mainly on the policy and institutional environment.

5.10 Risk factors and remediation

There are a number of critical requirements for the effective implementation of ESP 2018–2030:

- a consistent and equitable allocation of public financial resources to education that will affect broad-based internal and external efficiency in education;
- a results-oriented management of the expenditure system that ensures coherence between spending and implementation needs emerging from the M&E system;
- a well-managed continuing capacity building plan for the sustainability of ESP;
- a well-planned sector-wide approach to coordinate development partners’ support;
- effective communication to stakeholders; and
- built-in flexibility that allows for adaptation to change as circumstances and policies change.

The involvement and support of high-level officials in the MOE, coupled with the extensive consultation with other stakeholders during the development of the ESP, gives confidence that there is a high-level of commitment for achieving the objectives of the ESP. However, there are risk factors that exist that need to be managed. These include risks to the broad goal, to the indicators, to the performance objectives, to the outputs, and to the action plan. It is important for each division and agency to assess potential risks and develop a plan to manage risk.

Table 15 presents the risks to the implementation of the ESP that have been identified, and how these can be mitigated. In addition to this, more detailed risk assessment and management

procedures should be developed for each sub-sector and these should be updated on an annual basis.

Table 15: Risks identified for implementation of ESP 2018–2030

Risk	Potential adverse impact	Risk level	Risk management strategy	Responsibility
Inadequate government funding	Educational targets not achieved, which cascades through the whole system	M	MOFEP to participate in monitoring and budgeting activities	Minister of Education
Weak or unsustainable support from society and sectors related to education	Discontinuation/revision of targets and procedures. Limited quality outcomes at all educational levels	H	Invest more in information communication and dissemination of the ESP. Promote civil society participation in the execution of key programmes	Minister of Education
Insufficient international financing to support the implementation of the ESP	MOE not able to build the internal capacity to implement the ESP. Education targets not achieved as a result	H	Strengthen support with key development partners. Establish new partnerships with other DPs. Explore private sources of funding or PPPs	Minister of Education; MOFEP; NDPC
High expenditures on compensation leaves inadequate funds for goods and services and capital expenditure	Not enough internal funding for TLMs, libraries, regular in-service training for teachers, and remedial support for pupils at the pre-tertiary level	H	Ensure increase in government funding and higher allocation to other goods and services and capital. Implement a comprehensive framework on funding	Minister of Education
Ineffective mechanisms for programme management and M&E	Indicators in ESP not achieved and limited quality of outcomes	M	Strengthen monitoring and reporting measures, including ADEOP preparation, Circuit Supervisor monitoring, and strengthen structures	Minister of Education
Poor remediation of teachers	Inadequate pedagogical skills to improve children's learning, including literacy; poor content knowledge	M	Strengthen continuous professional development and improve pre-service training of teachers	Minister of Education

6 Communications strategy

Three regional consultations were held in December 2017 to share both the ESP 2018–2030 and ESMTDP 2018–2021 with stakeholders at the national, regional, district, and school levels. The feedback received was then incorporated into updated plans. In addition to the MOE and its agencies, various other stakeholders were represented at these dissemination workshops, including civil society, the private sector, MMDAs, development partners, the media, etc. During the process of finalising the ESP and ESMTDP 2018–2021 from January to August 2018, consultation continued in order to share information from the plan, to engage stakeholders, and to further inform the plan. This culminated in the ESP and ESMDTP being shared at the National Education Week in August 2018, with the analysis, objectives, and strategies in the plan underpinning the discussions.

At the National Education Week 2018, the MOE was requested to share the ESP and ESMTDP documents widely to ensure districts and communities could engage and support the achievement of the vision set out in the plan. The MOE is committed to doing this through –

- ensuring the opportunity provided by key education events to present and inform stakeholders about the plan – in particular at regional and district level – is seized;
- linking messages on key education initiatives with the objectives in the plan; and
- disseminating copies of the ESP and ESMTDP 2018–2021 to all DEOs and supporting District Education Directors, to enable them to share the vision.

Central to the ESP’s vision of education in Ghana is the critical need to improve learning outcomes and offer high-quality education for all. To achieve this, the strategies outlined in the ESP will foster a culture of continuous improvement and learning, and will embed this in Ghana’s education system. To communicate the vision, which is underpinned by key reforms, the MOE, in collaboration with the Ministry of Information, has developed a ‘National Education Reform Communications Strategy’, which lays out the vision, objectives, and methods for the role of communications in the national education reforms. Communication will facilitate dialogue, negotiation, and consensus-building amongst key education stakeholders. In doing so, it will maximise the successful implementation and sustainability of the reforms, which are in themselves part of the vision underpinning the ESP 2018–2030 and ESMTDP 2018–2021.

To ensure this communication reaches from the central to the local level, the MOE will work in partnership with CSOs and NGOs, through the coordination of GNECC, to widely disseminate the ESP in the most appropriate form to local communities. This may include radio broadcasts, community meetings, and the creation of simple and engaging materials to communicate the key messages of the ESP. This is a role that CSOs have successfully played in the past and it will enable local communities to engage with the substance of the plan and understand what to expect from the national reform agenda. Furthermore, better coordination of the activities of NGOs in the sector is a stated objective within the ESP, and to improve this, whilst also enhancing dissemination of the plan, all NGOs that are given approval to work in education will receive a copy of the ESP and ESMTDP. Not only will this ensure that NGO activities are properly aligned with GoG’s plans but it will also provide another avenue through which local communities can understand and benefit from the strategies and activities of the plan.

An important aspect of communication is reporting on progress against the ESP and ESMTDP. Clear forms of communication for reporting on the ESMTDP 2018–2021 are already in place. The MOE will continue to produce the annual ESPR in July/August, which serves as the key document for annually reporting on indicators and targets outlined in the ESMTDP, as well as key programmes and interventions undertaken to achieve these results. This report is circulated widely among education stakeholders before the annual Sector Review during the Education Week. Regular meetings of the Sector Working Group, DP group, and civil society, through the coordination of GNECC, will also hold the MOE to account on progress against the stated targets.

The Sector Review serves as a reporting platform through which to share progress on the meeting of targets within the ESMTDP with education stakeholders, as well as to plan for the future. Education stakeholders at all levels are invited: schools, districts, regions, and headquarters. Other attendees include personnel within other ministries, DPs, tertiary institutions, CSOs, NGOs, and the private sector. The Aide Memoire that is signed at the end of the business meeting day of the Education Week serves as an accountability mechanism regarding the fulfilment of obligations agreed upon during the week.

Communication is central to achieving the objectives and ambition of the ESP and ESMTDP 2018–2021. By engaging and uniting stakeholders through clear communication of the ambition, priorities, and progress, the vision of a dynamic education sector that *‘prepares and equips all Ghanaians with relevant education and skills to promote socioeconomic development and national orientation’* will become a reality.

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Annex A: Education Reform Delivery Framework in Ghana¹³

A.1 Background

The Government of Ghana has initiated wide-ranging education reforms to transform teaching and learning and improve educational outcomes. The Ministry of Education (MOE) intends to deliver this comprehensive reform agenda through a coordinated Education Reform Delivery Framework spearheaded by the Minister of Education. The goal of the reforms is to transform the education sector and make it more relevant in regard to meeting the human resource and development needs of Ghana. It is expected that these reforms will ultimately contribute to the goals of the Education Sector Plan (ESP) and Sustainable Development Goal 4 (SDG 4), and will lead to the improvement of learning outcomes, especially at the pre-tertiary levels. Improved learning outcomes, enhanced accountability, and equity at all levels of the education sector are the three main priorities of the education reforms.

The reform agenda is required to make the sector effective in fulfilling the mission of the MOE and in creating institutions that are responsive to the achievements of the goals of the sector. Above all, there needs to be capacity and commitment throughout the system to enable effective implementation of the proposed reforms. These reforms include the following:

1. **Policy on teacher education reforms through Transforming Teacher Education and Learning (T-TEL):** Leads to the conversion of the Colleges of Education (COEs) into University Colleges and the roll-out of a new Bachelor of Education teacher education curriculum to improve the quality of new teachers for the basic education sector.
2. **Pre-tertiary curriculum reform through the National Council for Curriculum and Assessment (NaCCA):** Leads to the design and implementation of a new pre-tertiary education curriculum with standards and assessment frameworks.
3. **Legal, institutional, and regulatory reforms:** Leads to the creation of a new agency that combines the functions of the National Accreditation Board (NAB) and the National Council for Tertiary Education (NCTE).
4. **Tertiary education reform:** Leads to the conversion of the National Film and Television Institute (NAFTI) and the Ghana Institute of Journalism (GIJ) into two separate universities; and the consolidation of the Kumasi Campus of the University of Education Winneba and a few existing COEs into a Technical Teacher Training University, in addition to other governance and regulatory reforms.
5. **Technical, vocational education, and training (TVET) reforms:** Realigns all technical and vocational institutions (TVIs) to be under the MOE and creates a Technical and Vocational Education Service to govern them.
6. **Operationalisation of a pre-tertiary teacher professional and management development framework through the National Teaching Council (NTC):** Leads to the establishment of a teacher licensing and registration system in Ghana, and a framework for teacher career progression based on the acquisition of skills and competencies.

¹³ See MOE (2018) 'Education Reform Delivery Framework Concept Note', August 2018, for further details

7. **Introduction of a new school supervision and inspection system through the National Inspectorate Board (NIB):** Leads to the establishment of a new inspection framework, inspection tools, and revised inspection protocols, in partnership with Education Development and Office for Standards in Education (OFSTED).
8. **Basic education decentralisation reform:** Leads to the devolution of basic education to District Assemblies, impacting the functions of the Ghana Education Service (GES), NTC, NaCCA, and NIB.
9. **Public–private partnership initiative for school management:** Leads to the MOE and GES partnering with non-state actors to manage and deliver effective education service in public senior high schools (SHS).
10. **GES institutional reform:** leads to the streamlining of GES’s operations to increase efficiency and reduce the redundancies resulting from basic education decentralisation, and a comprehensive reform of human resources systems.
11. **Information and communication technology (ICT) in education reforms:** Seeks to develop early desire and competences in children to use ICT, equip pre-tertiary learners with ICT skills, infuse ICTs into education management, and transform teacher development and tertiary education through technology-based training.
12. **Secondary education reform (four pillars):** With the Free SHS Programme, the MOE seeks to absorb all fees paid at the SHS level, and additionally to expand physical infrastructure, improve quality, and promote skill development and equity.

These 12 reform initiatives are aimed at addressing the current weaknesses in Ghana’s education sector, as identified in the Education Sector Analysis on System Capacity report, and by senior Ministry officials. The weaknesses are¹⁴:

- a complex organisation at central level;
- low and uneven resource distribution, and low accountability for resource utilisation at local levels;
- salaries absorbing nearly all recurrent public expenditure;
- school and local-level accountability;
- issues of coordination across and within the Ministry and its agencies;
- inadequate coordination and monitoring of private schools;
- data gaps, and inadequate use of data and research to inform education policy and implementation;
- staff capacity gaps at the MOE, GES, and agencies; and
- issues with teacher capacity, high attrition rates, and teacher rationalisation.

The reforms detailed in the ESP 2018–2030 are designed to strengthen the sector institutions to overcome the abovementioned capacity gaps, and to accomplish the goals outlined in the ESP, which include:

¹⁴ At a planning session called by the Minister on 22 July 2018, in order to agree and operationalise the reform delivery framework.

- improved equitable access to and participation in quality basic education;
- improved equitable access to and participation in quality SHS education;
- strengthened competency-based skill development in TVET;
- improved opportunities for non-literate youth and adults to have free access to meaningful quality education and training;
- improved access for persons with disability, the vulnerable, and the talented;
- improved equitable access to world-class tertiary education; and
- improved planning and management efficiency in the delivery of education.

The end goal of these reforms is ‘to deliver quality education service at all levels that will equip learners in educational institutions with the skills, competencies and awareness that would make them functional citizens who can contribute to the attainment of the national development goals.’

A.2 The Education Reform Delivery Framework

The Concept Note for the Education Reform Delivery Framework outlines an approach, led by the MOE, to ensure:

- i. alignment and coordination of reforms within the framework of the ESP, and a mechanism to ensure that synergies and linkages between them are identified and maximised;
- ii. clear ownership and accountability for each reform at all levels of the system down to the school, with each reform ‘owner’ able to access capacity development and expert advice to support implementation; and
- iii. identification and resolution of blockages, obstacles, and bottlenecks to the implementation of priority reforms and learning outcomes.

The design of Ghana’s Education Reform Delivery Framework draws upon the evidence and experience of the use of delivery approaches to ensure that it adheres to a number of key best practice principles which the MOE believes will drive effective implementation of education reforms. These principles are summarised below:

- **Prioritisation and resourcing:** Focusing on a number of key priorities to ensure that they are adequately resourced and that the intended results are clearly understood across the education system.
- **Data, information, and routines:** Using regular data as the basis for establishing effective performance management routines, developing metrics to measure priorities, and ensuring that this is used to inform decision-making.
- **Analysis and understanding of implementation issues:** Actively engaging and supporting Reform Owners to identify blockages and issues, resolving these through rapid problem-solving through to school and local levels.

- **Communication, accountability, and culture change:** Ensuring effective accountability for reforms, and overseeing and coordinating communications on progress against the reforms.

The MOE recognises the importance of phasing and prioritising reform initiatives so that they complement each other and are implemented in a logical manner to maximise the intended impact on learning outcomes. Failure to correctly phase reforms risks undermining their impact whilst trying to implement too many reforms at once risks overstretching capacity. The new Education Reform Delivery Framework will address this issue by:

- i. having a broad remit to oversee and report on progress for all reform initiatives, which will be required to produce implementation roadmaps and operate their own working groups; and
- ii. focusing on a small sub-set of prioritised issues, as identified and directed by the Minister, to problem-solve and drive implementation through deep-dives and the production of prioritised action plans as necessary.

A small number of reform initiatives with the greatest potential to rapidly improve learning outcomes will therefore need to be prioritised if the education reform structures are to assist in achieving rapid results. The initial planning session led by the Minister on 22 July 2018 identified poor school and local-level accountability, low teacher time-on-task, weak teacher capacity, and lack of prioritisation of literacy and numeracy as the major constraints to improved learning outcomes. Given that the MOE's principal focus is on fostering rapid improvements to learning outcomes, it is likely that the following reform areas will be prioritised for in-depth monitoring, problem-solving, and other technical support:

- policy on teacher education reforms through T-TEL;
- the design and implementation of a new pre-tertiary education curriculum through NaCCA;
- legal, institutional and regulatory reforms; and
- operationalisation of a pre-tertiary teacher professional and management development framework through the NTC.

To ensure effective and efficient delivery and implementation of the prioritised reforms, the MOE will establish an Education Reform Secretariat which will ensure that there is clear leadership of the process, led by the Minister of Education. This will have four main functions:

- i. **Coordination** – Alignment and coordination of reforms within the framework of the ESP to ensure that synergies and linkages between them are identified and maximised.
- ii. **Accountability** – Clear ownership and accountability for each reform through a named 'reform owner'.
- iii. **Capacity building** – Each reform 'owner' is able to access capacity development and advice to support implementation.
- iv. **Problem-solving** – Identification and resolution of blockages, obstacles, and bottlenecks to the implementation of priority reforms and learning outcomes.

A.3 Structure and staffing of the Education Reform Delivery Framework

The Education Reform Delivery Framework will be comprised of the Reform Steering Committee, the Reform Technical Working Group, and the Education Reform Secretariat. The implementation of each reform initiative will be led by a Reform Owner, who will be ultimately accountable for delivering results for that reform.

The Reform Steering Committee will be chaired by the Minister of Education, and will thereby provide the highest level of accountability to drive reforms. The Reform Technical Working Group will be made up of all Reform Owners implementing reform initiatives, and will be coordinated and chaired by the National Reform Coordinator. The Education Reform Secretariat, led by the National Reform Coordinator, will report directly to the Minister of Education and ensure that every Reform Owner has developed a 'roadmap' with clear activities, targets and milestones. Each Reform Owner will then report on the progress of implementation every month using the forum provided by the Technical Working Group to problem-solve any blockages, etc. The secretariat will be staffed by a small number of capable advisers who will carry out the following functions:

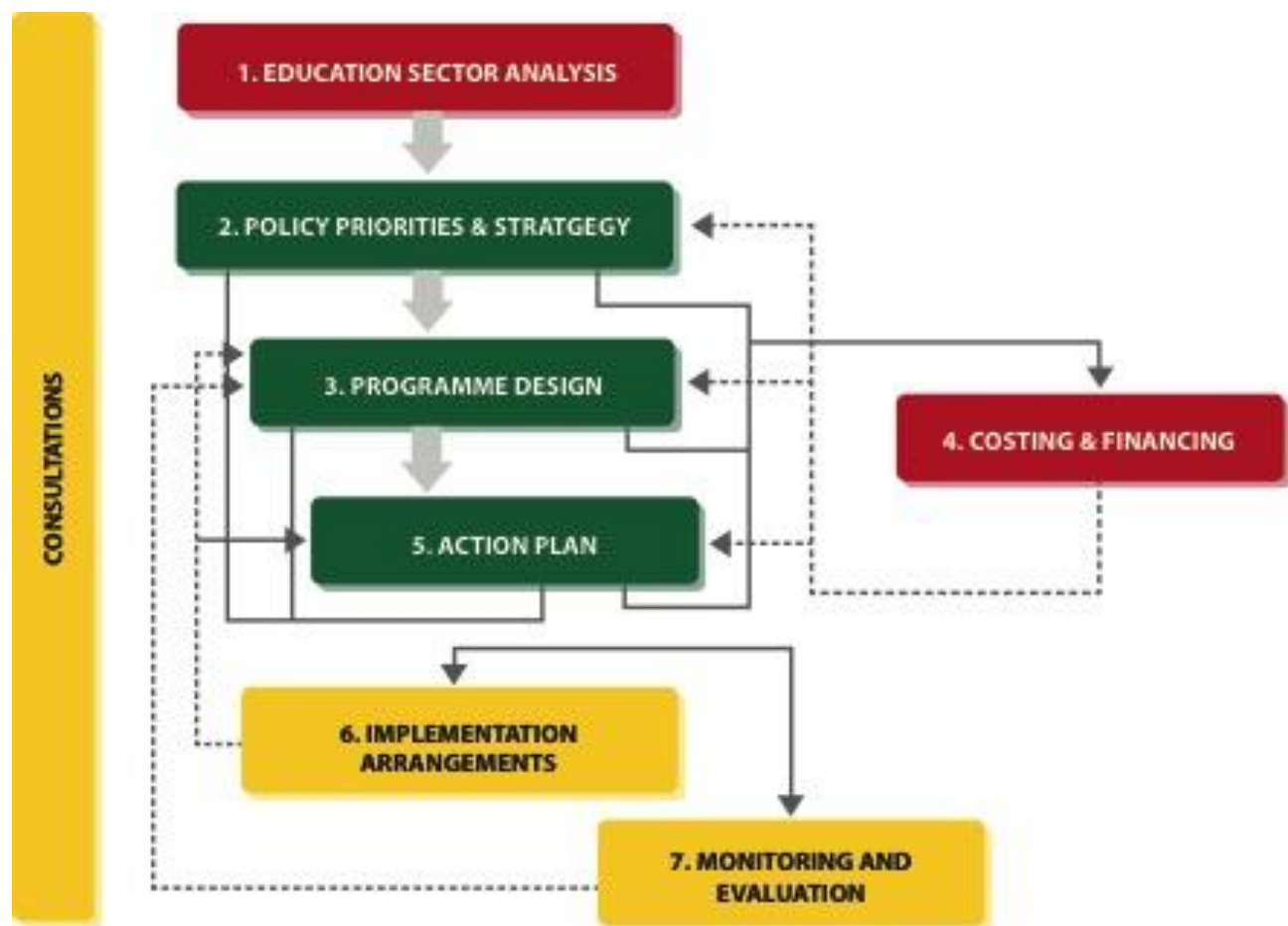
- *Performance reporting* – Compiling progress reports from Reform Owners and conducting all preparations for Education Reform Steering Committee meetings.
- *Technical support, advice, and capacity building* – to working groups to enable them to oversee initiative progress, develop roadmaps, and then ensure that these roadmaps remain on track.
- *Data and analysis* – Assisting working groups to establish data collection and reporting mechanisms (using existing structures and systems where possible) to ensure that they are able to track progress against each reform initiative.
- *Problem-solving* – as directed by the Minister of Education through the Reform Steering Committee – focusing on his priorities, to conduct a rapid analysis of the issue to develop and implement practical solutions.

In addition, technical advisers will be recruited as and when necessary to support Reform Owners to address specific gaps identified through the Technical Working Group. They will provide technical expertise as required for the successful delivery of the objectives of the reform. these technical advisers will report to the respective Reform Owners.

Annex B: ESP development process

The ESP 2018–2030 was developed to align with guidelines outlined in GPE's *Guidelines for Education Sector Plan Preparation* (GPE and UNESCO, 2015) captured in Figure 10, which highlights a country-led approach and a plan adapted to respond to the needs of the country. The ESP development framework has the following seven stages: education sector analysis, policy priorities and strategies, costing and financing, programme design, action plan, implementation arrangements, and M&E.

Figure 10: The components of the ESP development process



Source: GPE and UNESCO, 2015

In developing the plan, particular attention was given to the vision underlying the education system in Ghana: 'to produce well-balanced individuals with the requisite knowledge, skills, values, aptitudes and attitudes to become functional and productive citizens for the total development and the democratic advancement of the nation' (GoG, 2002). This philosophy of education continues to resonate in the current vision of education in Ghana.

The first step in developing the ESP 2018–2030 was to review relevant documentation, including the ESP 2010–2020, annual status reports, and national surveys and censuses,

amongst others. In addition, relevant statistics were collected and analysed to understand the current state of education. This information provided the support structure under which the strengths and weaknesses within Ghana's education sector were identified. Accompanying this analysis was a review of international commitments, national-level plans, and the macroeconomic context of Ghana.

Policy priorities and strategies were identified through the dissemination of the ESA report to senior officers at the MOE and its agencies. The development of the action plan involved consultations with the Technical Team and Steering Committee to identify the overarching framework. The action plan development process was conducted using the framework decided in the programme design stage. The zero draft plan went through consultations with internal committees.

To ensure that the final ESP 2018–2030 evolves from the contributions of relevant stakeholders, the 2016 NESAR, the annual conference organised by the MOE, focused on reviewing the draft ESP 2018–2030. NESAR involved stakeholders from DEOs and REOs, various MOE agencies, other relevant ministries, CSOs, NGOs, and the donor community. After presenting aspects of the ESP, NESAR participants were divided into groups along sub-sectors, reflecting their expertise, and were asked to comment on key areas of the ESP. The Local Education Group also provided detailed written comments on the draft ESP. Feedback from stakeholders was then incorporated into the ESP. These inputs were critical to the development of the plan, to ensure ownership and accountability on the part of a wide range of stakeholders.

Based on this feedback and after careful review of internationally prepared guidelines, there was a need to conduct further analysis specifically on financing and costing, systems capacity, and equity. In addition, it was necessary to incorporate emerging policy directions from the newly elected government. Consultants were hired to this end and the resulting analyses produced were incorporated into a revised version of the plan, with a large degree of input from the MOE and the Local Education Group. The new version of the ESP was subject to three regional consultations to again ensure that wider stakeholders were involved in the process for feedback and buy-in, and the feedback received from these consultations was incorporated into the ESP. Thus, the final ESP 2018–2030 has emerged after a collaborative process with diverse stakeholders, incorporating extensive buy-in both in terms of the process and content. This level of engagement is expected to continue as the ESP is implemented and reviewed, and a strong communication strategy has been outlined for this purpose.

Annex C: Mapping strategies in National Medium Term Development Planning Framework 2018–2021 to sub-policy objectives of the ESP

Sub-policy objectives in ESP 2018–2030	Strategies in ESP 2018–2030	Matching strategies in NMTDPF 2018–2021
EM 3.3: Improved financial management and equity in resource allocation	EM 3.3.3: Encourage national, regional, district, and institutional units to mobilise funds domestically to support basic education	1.1.1: Redefine basic education to include secondary education
BE 2.4: Improved quality and relevance of inclusive basic education curriculum	BE 2.4.1: Develop and implement a comprehensive standards-based basic school curriculum to improve learning achievement in basic (foundational) skills areas, the 4Rs (Reading, wRiting, aRithmetic, and cReativity)	1.1.2: Reform curriculum, with an emphasis on competencies in reading, writing, arithmetic, and creativity at the primary level, and introduce the history of Ghana, French, and (optional) Arabic at the pre-tertiary level
SE 2.3: Improved quality and relevance of SHS curriculum and enhanced delivery of curriculum and assessment framework	SE 2.3.1: Improve quality and relevance of SHS curriculum	
BE 2.2: Improve learning assessment to support learning achievement of basic school pupils	BE 2.2.2: Promote the development of assessment systems for tracking both pupils' and schools' performance on a periodic basis	1.1.3: Develop standards and national assessment test for foundational literacy and numeracy competencies at primary level
SE 1.1: Policy to ensure public SHS is free for all Ghanaian children is implemented	SE 1.1.1: Renovate, expand, and appropriately equip SHS to accommodate increasing demand, starting with the three northern regions	1.1.4: Continue implementation of free SHS and TVET for all Ghanaian children
	SE 1.1.2: Implement a promotion strategy to encourage students to attend free public SHS and select appropriate SHS to attend	
TVET 1.1: Expanded and upgraded teaching, learning, and training infrastructure to increase access	TVET 1.1.1: Establish new TVET centres and upgrade existing facilities	

SE 1.2: Improved access for disadvantaged groups	SE 1.2.2: Remove all barriers to SHS education for SEN/disabled students	1.1.5: Ensure inclusive education for all boys and girls with SEN
TVET 1.2: Increased enrolment of all categories of learners, including females, PWD, and disadvantaged groups	TVET 1.2.2: Increase enrolment of females and learners with special needs and disabilities	
NFE 1.3: Increased enrolment of disadvantaged groups within NFE	NFE 1.3.1: Increase enrolment of learners with special needs or disabilities and vulnerable populations	
ISE 1.4: Increased enrolment of vulnerable populations and learners with SEN from excluded groups	ISE 1.4.1: Ensure social intervention programmes reach schools/children with SEN	
BE 2.6: Improved STEM learning achievement, quality, and relevance of teaching and learning at the basic school level	BE 2.6.1: Provide relevant opportunities for ICT and skills development with well-supplied ICT and science facilities	1.1.6: Popularise and demystify the teaching and learning of STEM and ICT education in basic and secondary education
	BE 2.6.2: Promote science and technical education in basic schools, particularly for girls	
	BE 2.6.3: Ensure the availability of qualified science and maths teachers in JHS	
SE 2.2: Improved learning outcomes for girls in all subjects, and for all students in STEM subjects	SE 2.2.1: Invest in STEM materials and facilities to ensure SHS graduates are adequately prepared for tertiary institutions and the world of work	
TVET 2.2: Improved relevance of the TVET curriculum to labour market demands and emerging economic sectors	TVET 2.2.3: Strengthen STEM-based programmes, the learning of entrepreneurial skills, and competency-based training methodology in TVET provision to enhance employability	
EM 3.7: Improved mainstreaming of ICT use in education at all levels	EM 3.7.2: Improve ICT infrastructure in educational institutions	

	EM 3.7.3: Strengthen Centre for National Distance Learning Open Schooling (CENDLOS)	
TE 2.2: Strengthened STEM education at the tertiary level	TE 2.2.1: Provide adequate quality resources for STEM education in tertiary institutions	1.1.7: Accelerate the implementation of policy on 60:40 admission ratio of science to humanities students at the tertiary level
	TE 2.2.3: Strengthen Technical Universities as apex TVET institutions	
BE 2.4: Improved quality and relevance of inclusive basic education curriculum	BE 2.4.3: Use effective strategies to ensure transition from reading in local language to English by P4	1.1.8: Facilitate implementation of the language policy
EM 3.1: Improved mechanisms for efficient teacher management	EM 3.1.3: Strengthen teacher recruitment, deployment, and management policy	
NFE 2.2: Relevance of the content and delivery of non-formal literacy programmes strengthened	NFE 2.2.1: Ensure curriculum is up-to-date to address NFE needs, and appropriate pedagogy is used	1.1.9: Review policies to meet emerging demands in education, especially at the tertiary level
TVET 2.2: Improved relevance of the TVET curriculum to labour market demands and emerging economic sectors	TVET 2.2.1: Develop and deliver curriculum based on identified skills gaps and occupational standards developed jointly with Sector Skills Councils	
	TVET 2.2.2: Incorporate green technologies into TVET and prepare learners for green jobs	
TE 2.2: Strengthened STEM education at the tertiary level	TE 2.2.2: Forge links with industry to enhance teaching and learning	1.1.9: Review policies to meet emerging demands in education, especially at the tertiary level
TE 2.4: Strengthened quality of teacher education	TE 2.4.3: Convert COEs into University COEs and transform the diploma into a four-year degree programme derived from the National Teachers Standards and curriculum framework	

BE 1.1: Increased enrolment in basic schools, particularly in disadvantaged communities	BE 1.1.2: Improve quality of supply of infrastructure in public KG, primary schools and JHS to stimulate increased demand, particularly in disadvantaged districts, and to respond to changes in population and the distribution of school demand	1.1.10: Expand infrastructure and facilities at all levels
SE 1.1: Policy to ensure public SHS is free for all Ghanaian children is implemented	SE 1.1.1: Renovate, expand, and appropriately equip SHS to accommodate increasing demand, starting with the three northern regions	
TVET 1.1: Expanded and upgraded teaching, learning, and training infrastructure to increase access	TVET 1.1.1: Establish new TVET centres and upgrade existing facilities	
NFE 1.1: Adequate provision made for adult literacy programme	NFE 1.1.1: Strengthen existing NFE literacy programme with targeted interventions in the three northern regions	
	NFE 1.1.2: Develop additional NFE literacy programmes to include more learners in targeted areas (northern regions) with low literacy	
ISE 1.1: Expanded/transformed school infrastructure to encourage enrolment of learners with SEN	ISE 1.1.1: Ensure that physical infrastructure designs of existing educational institutions/schools are modified to enhance opportunities for learners with SEN	
TE 1.1: Increased numbers of admission places available to meet all needs	TE 1.1.1: Expand and provide disability-friendly infrastructure in public tertiary institutions, and establish new institutions with sufficient differentiation and diversification	1.1.11: Restructure content of educational system to emphasise character building, value nurturing, patriotism, and critical thinking
BE 2.4: Improved quality and relevance of inclusive basic education curriculum	BE 2.4.1: Develop and implement a comprehensive standards-based basic school curriculum to improve learning achievement in basic (foundational) skills areas, the 4Rs (Reading, wRiting, aRithmetic, and cReativity)	
SE 2.3: Improved quality and relevance of SHS curriculum and enhanced delivery of curriculum	SE 2.3.1: Improve quality and relevance of SHS curriculum	

TVET 3.1: A strong legal, governance, and regulatory framework established for greater coherence and accountability of the TVET system to effectively respond to national socioeconomic development goals	TVET 3.1.1: Establish new TVET governance structure and regulatory framework that is embedded within national development plans	1.2.1: Realign and revamp existing public TVIs for effective coordination and standardisation
EM 3.4: Strengthened sector-wide approach to coordinate NGOs', CSOs', and donor partners' support to ensure smooth implementation of the ESP	EM 3.4.1: Improve coordination and accountability for donor and CSO/NGO support of ESP	1.2.2: Build effective partnership with religious bodies, civic organisations, and private sector in the delivery of quality education
EM 3.6: Strengthened education service delivery through collaboration with non-state actors	EM 3.6.1: Develop and strengthen engagement of non-state actors in the provision and management of education at local and school levels	
EM 3.5: Strengthened operational structures of MOE/agencies for effective oversight and implementation of decentralisation	EM 3.5.2: Implement the education decentralisation policy	1.2.3: Fully decentralise the management of education service delivery
EM 3.1: Improved mechanisms for efficient teacher management	EM 3.1.2: Implement the PTPDM policy, with its associated in-service training and career progression	1.2.4: Implement an accelerated programme for teacher development and professionalisation
EM 3.2: Improved capacity to use evidence to inform plans of MOE and its agencies, institutions, and MMDAs	EM 3.2.2: Develop mechanisms for strengthening coordination among agencies and units of the MOE	1.2.5: Implement reforms and strengthen the regulatory agencies that operate in the education sector
EM 3.5: Strengthened operational structures of MOE/agencies for effective oversight and implementation of decentralisation	EM 3.5.1: Review the operating Acts of the various regulatory bodies and resource these bodies in order to strengthen them to support decentralisation	
SE 1.1: Policy to ensure public SHS is free for all Ghanaian children is implemented	SE 1.1.1: Renovate, expand, and appropriately equip SHS to accommodate increasing demand, starting with the three northern regions	1.2.6: Establish well-resourced and functional SHS in all districts
SE 1.2: Improved access for disadvantaged groups	SE 1.2.1: Ensure the provision of a gender-friendly environment, guidance, and counselling where there are large disparities in gender parity	

	SE 1.2.2: Remove all barriers to SHS education for SEN/disabled students	
	SE 1.2.3: Encourage access for those from low-income backgrounds and deprived districts	
All sub-policy objectives for each strategic goal under Policy Objective 2: Improved quality of teaching and learning and STEM at all levels	All strategies under Policy Objective 2: Improved quality of teaching and learning and STEM at all levels	1.2.7: Enhance quality of teaching and learning
BE 2.1: Increased use of quality teaching and learning materials in basic education	BE 2.1.1: Ensure that end-user schools, teachers, and pupils have access to relevant, age-appropriate, and adequate teaching/learning materials	
	BE 2.1.2: Develop comprehensive policy frameworks for the development and distribution of teaching and learning materials and library facilities	
SE 2.1: Increased use of quality TLMs and equipment in SHS	SE 2.1.1: Invest in TLMs and equipment in SHS	
TVET 1.1: Expanded and upgraded teaching, learning, and training infrastructure and diversified programme offerings	TVET 1.1.1: Establish new TVET centres and upgrade existing facilities	1.2.8: Ensure adequate supply of teaching and learning materials
NFE 2.1: Increased use of quality TLMs in NFE programmes	NFE 2.1.1: Ensure provision of TLMs in NFE programmes	
ISE 2.2: Relevant TLMs for learners with SEN provided	ISE 2.2.1: Ensure learners with SEN are provided with specialised TLMs to support their needs	
TE 2.1: Improved quality of teaching and learning resources	TE 2.1.1: Upgrade and expand teaching and learning facilities in public tertiary institutions, including ICT	
NFE 3.2: Sustained and adequate funding for NFE operations	NFE 3.2.1: Identify budget needs for NFE and explore additional sources of funding from the private sector and PPPs	1.3.1: Explore alternative sources for NFE
BE 2.4: Improved quality and relevance of inclusive basic education curriculum	BE 2.4.1: Develop and implement a comprehensive standards-based basic school curriculum to improve learning achievement in basic (foundational) skills areas, the 4Rs (Reading, wRiting, aRithmetic, and	1.3.2: Provide life skills training and management for managing personal hygiene, fire safety, environment, sanitation, and climate change

	cReativity)	
SE 2.3: Improved quality and relevance of SHS curriculum and enhanced delivery of curriculum	SE 2.3.1: Improve quality and relevance of SHS curriculum	
BE 3.3: Improved planning, monitoring, evaluation, and reporting systems	BE 3.3.3: Coordinate and promote evidence, evaluation, and research to strengthen policymaking	1.3.3: Improve the learning of research and innovation development
SE 3.2: Improved research, monitoring, evaluation, and reporting systems	SE 3.2.1: Strengthen research, monitoring, and evaluation systems	
EM 3.2: Improved capacity to use evidence to inform plans of MOE and its agencies and institutions, and of MMDAs	EM 3.2.1: Institute a mechanism for identifying and coordinating policy-oriented research at the MOE	
SE 2.2: Improved learning outcomes in STEM subjects, and improved overall learning outcomes for girls	SE 2.2.1: Invest in STEM materials and facilities to ensure SHS graduates are adequately prepared for tertiary institutions and the world of work	1.3.4: Ensure the implementation of the national policy on 60:40 admission ratio in favour of science, mathematics, engineering, and technology
TE 2.2: Strengthened STEM and TVET education at the tertiary level	TE 2.2.1: Provide adequate quality resources for STEM education in tertiary institutions	
	TE 2.2.3: Strengthen Technical Universities as apex TVET institutions	
EM 3.7: Improved mainstreaming of ICT use in education at all levels	EM 3.7.1: Strengthen education ICT policy to make it more comprehensive	
	EM 3.7.2: Improve ICT infrastructure in educational institutions	
	EM 3.7.3: Strengthen Centre for National Distance Learning Open Schooling (CENDLOS)	
BE 3.3: Improved planning, monitoring, evaluation, and reporting systems	BE 3.3.1: Strengthen M&E units and processes throughout the basic education level, including MOE (PBME and SRIM), GES, and decentralised systems, to improve	1.3.5: Establish M&E systems in planning management units

	the EMIS system	
SE 3.2: Improved research, monitoring, evaluation, and reporting systems	SE 3.2.1: Strengthen research, monitoring, and evaluation systems	
TVET 3.1: A strong legal, governance, and regulatory framework for greater coherence and accountability of the TVET system to effectively respond to national socioeconomic development goals established	TVET 3.1.3: Strengthen TVET research and TVET Management Information System, and integrate this with the EMIS database	
NFE 3.3: Accountability of NFE systems strengthened	NFE 3.3.1: Improve monitoring, evaluation, and reporting of NFE initiatives	
ISE 3.1: Research, monitoring, and evaluation systems strengthened	ISE 3.1.1: Review and realign EMIS to reflect inclusive education issues	
TE 3.4: Improved data collection and management	TE 3.4.1: Strengthen data collection and analysis systems, and strengthen M&E systems	
TE 1.1: Increased numbers of admission places available to meet all needs	TE 1.1.1: Expand and provide disability-friendly infrastructure in public tertiary institutions, and establish new institutions with sufficient differentiation and diversification	1.3.6: Ensure the implementation of a policy of differentiation and diversification
TE 2.3: Improved research and postgraduate training	TE 2.3.1: Determine national priority research areas and provide adequate and sustained funding for research infrastructure, human resources for research, and research activities	1.3.7: Set up a National Research Fund

Annex D: Mapping SDG targets to sub-policy objectives of the ESP

SDG target	Matching sub-policy objective in ESP 2018–2030
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	BE 1.1: Increased enrolment in basic schools, particularly in disadvantaged communities
	BE 1.2: Achieved and sustained gender parity in access to, and completion of, quality basic education, with a focus on reducing regional disparities
	BE 1.3: Increased provision of complementary basic education as an interim measure to deliver mainstream primary education to hard-to-reach children
	BE 2.1: Increased use of quality teaching and learning materials in basic education
	BE 2.4: Improved quality and relevance of inclusive basic education curriculum
	BE 2.5: Enhanced instructional practices of basic education teachers and instructional leadership
	SE 1.1: Policy to ensure public SHS is free for all Ghanaian children is implemented
	SE 1.2: Improved access for disadvantaged groups
	SE 2.2: Improved learning outcomes in STEM subjects, and improved overall learning outcomes for girls
	SE 2.3: Improved quality and relevance of SHS curriculum and enhanced delivery of curriculum

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	BE 1.1: Increased enrolment in basic schools, particularly in disadvantaged communities
	BE 1.2: Achieved and sustained gender parity in access to, and completion of, quality basic education, with a focus on reducing regional disparities
	BE 2.1: Increased use of quality teaching and learning materials in basic education
	BE 2.3: Improved learning environments, including health and sanitation, child protection, and guidance and counselling in basic schools
	BE 2.4: Improved quality and relevance of inclusive basic education curriculum
	BE 2.5: Enhanced instructional practices of basic education teachers and instructional leadership
	TE 2.4: Strengthened quality of teacher education
4.3: By 2030, ensure equal access for all women and men to affordable and quality technical, vocational, and tertiary education, including university	TVET 1.1: Expanded and upgraded teaching, learning, and training infrastructure, and diversified programme offerings
	TVET 2.2: Improved relevance of the TVET curriculum to labour market demands and emerging economic sectors
	TE 2.2: Strengthened STEM education at the tertiary level
	TE 1.1: Increased numbers of admission places available to meet all needs
	TE 2.3: Improved research and postgraduate training
4.4: By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs, and entrepreneurship	BE 2.6: Improved STEM learning achievement, and quality and relevance of teaching and learning at the basic school level
	SE 2.2: Improved learning outcomes in STEM subjects, and improved overall learning outcomes for girls
	TVET 2.2: Improved relevance of the TVET curriculum to labour market demands and emerging economic sectors
	NFE 2.2: Relevance of the content and delivery of non-formal literacy programmes strengthened
	TE 2.2: Strengthened STEM education at the tertiary level
	EM 3.7: Improved mainstreaming of ICT use in education at all levels

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	BE 1.2: Achieved and sustained gender parity in access to, and completion of, quality basic education, with a focus on reducing regional disparities
	BE 1.3: Increased provision of complementary basic education as an interim measure to deliver mainstream primary education to hard-to-reach children
	SE 1.1: Policy to ensure public SHS is free for all Ghanaian children is implemented
	SE 1.2: Improved access for disadvantaged groups
	SE 2.2: Improved learning outcomes in STEM subjects, and improved overall learning outcomes for girls
	TVET 1.2: Increased enrolment of all categories of learners, including females, PWD, and disadvantaged groups
	NFE 1.3: Increased enrolment of disadvantaged groups within NFE
	ISE 1.4: Increased enrolment of vulnerable populations and learners with SEN from excluded groups
	TE 1.2: Increased participation by women, the disabled, and socioeconomically disadvantaged groups in tertiary education
4.6: By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy	EM 3.3: Improved equity in financial management and resource allocation through use of evidence and data
	NFE 1.1: Adequate provision made for adult literacy programmes
	NFE 2.2: Relevance of the content and delivery of non-formal literacy programmes strengthened
	BE 2.2: Improve learning assessment to support learning achievement of basic school pupils

4.7: By 2030, ensure that all learners acquire the 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	BE 2.4: Improved quality and relevance of inclusive basic education curriculum
	SE 2.3: Improved quality and relevance of SHS curriculum and enhanced delivery of curriculum
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	BE 1.2: Achieved and sustained gender parity in access to, and completion of, quality basic education, with a focus on reducing regional disparities
	SE 1.2: Improved access for disadvantaged groups
	TVET 1.2: Increased enrolment of all categories of learners, including females, PWD, and disadvantaged groups
	NFE 1.3: Increased enrolment of disadvantaged groups within NFE
	ISE 1.1: Expanded/transformed school infrastructure to encourage enrolment of learners with SEN
	TE 1.2: Increased participation by women, the disabled, and socioeconomically disadvantaged groups in tertiary education
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 and ICT, technical, engineering, and scientific programmes, in developed countries and other developing countries	BE 1.1: Increased enrolment in basic schools, particularly in disadvantaged communities
	SE 1.2: Improved access for disadvantaged groups
	TVET 1.2: Increased enrolment of all categories of learners, including females, PWD, and disadvantaged groups
	TE 1.2: Increased participation by women, the disabled, and socioeconomically disadvantaged groups in tertiary education

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

BE 2.5: Enhanced instructional practices of basic education teachers and instructional leadership

SE 2.3: Improved quality and relevance of SHS curriculum and enhanced delivery of curriculum

TVET 2.1: Improved quality of TVET provision

NFE 2.2: Relevance of the content and delivery of non-formal literacy programmes strengthened

TE 2.4: Strengthened quality of teacher education

Annex E: Mapping African Union strategic objectives to sub-policy objectives of the ESP

African Union strategic objective	Matching sub-policy objective in ESP 2018–2030
SO 1: Revitalise the teaching profession to ensure quality and relevance at all levels of education	BE 2.5: Enhanced instructional practices of basic education teachers and instructional leadership
	SE 2.3: Improved quality and relevance of SHS curriculum and enhanced delivery of curriculum
	TVET 2.1: Improved quality of TVET provision
	NFE 2.2: Relevance of the content and delivery of non-formal literacy programmes strengthened
	TE 2.1: Improved quality of teaching and learning resources
	TE 2.4: Strengthened quality of teacher education
	EM 3.1: Improved mechanisms for efficient teacher management
SO 2: Build, rehabilitate, and preserve education infrastructure and develop policies that ensure a permanent, healthy, and conducive learning environment in all sub-sectors and for all, so as to expand access to quality education	BE 1.1: Increased enrolment in basic schools, particularly in disadvantaged communities
	SE 1.1: Policy to ensure public SHS is free for all Ghanaian children is implemented
	TVET 1.1: Expanded and upgraded teaching, learning, and training infrastructure
	NFE 1.1: Adequate provision made for adult literacy programmes
	ISE 1.1: Expanded/transformed school infrastructure to encourage enrolment of learners with SEN
	TE 1.1: Increased numbers of admission places available to meet all needs
SO 3: Harness the capacity of ICT to improve access, quality, and management of education and training systems	BE 2.6: Improved STEM learning achievement, and quality and relevance of teaching and learning at the basic school level
	SE 2.2: Improved learning outcomes in STEM subjects, and improved overall learning outcomes for girls
	TVET 2.2: Improved relevance of the TVET curriculum to labour market demands and emerging economic sectors
	NFE 2.2: Relevance of the content and delivery of non-formal literacy programmes strengthened
	TE 2.2: Strengthened STEM education at the tertiary level
	EM 3.7: Improved mainstreaming of ICT use in education at all levels

SO 4: Ensure acquisition of requisite knowledge and skills, as well as improved completion rates, at all levels and groups through harmonisation processes across all levels for national and regional integration	TVET 3.1: A strong legal, governance, and regulatory framework established for greater coherence and accountability of the TVET system to effectively respond to national socioeconomic development goals
	NFE 3.4: Strengthened intersectoral links to ensure lifelong learning opportunities for NFE graduates
	TE 3.1: Harmonised policy and legislative framework and strengthened capacities for effective supervision and regulation of the tertiary education sub-sector
	EM 3.2: Improved capacity to use evidence to inform plans of the MOE and its agencies and institutions, and MMDAs
	EM 3.4: Strengthened sector-wide approach to coordinate NGOs', CSOs', and donor partners' support to ensure smooth implementation of the ESP
	EM 3.6: Strengthened education service delivery through collaboration with non-state actors
SO 5: Accelerate processes leading to gender parity and equity	BE 1.2: Achieved and sustained gender parity in access to, and completion of, quality basic education, with a focus on reducing regional disparities
	BE 1.3: Increased provision of complementary basic education as an interim measure to deliver mainstream primary education to hard-to-reach children
	SE 1.1: Policy to ensure public SHS is free for all Ghanaian children is implemented
	SE 1.2: Improved access for disadvantaged groups
	SE 2.2: Improved learning outcomes in STEM subjects, and improved overall learning outcomes for girls
	TVET 1.2: Increased enrolment of all categories of learners, including females, PWD, and disadvantaged groups
	NFE 1.3: Increased enrolment of disadvantaged groups within NFE
	ISE 1.4: Increased enrolment of vulnerable populations and learners with SEN from excluded groups
	TE 1.2: Increased participation by women, the disabled, and socioeconomically disadvantaged groups in tertiary education
	EM 3.3: Improved equity in financial management and resource allocation through use of evidence and data

SO 6: Launch comprehensive and effective literacy programmes across the continent to eradicate the scourge of illiteracy	NFE 1.1: Adequate provision made for adult literacy programmes
	NFE 2.2: Relevance of the content and delivery of non-formal literacy programmes strengthened
SO 7: Strengthen the science and maths curricula in youth training and disseminate scientific knowledge and culture in society	BE 2.4: Improved quality and relevance of inclusive basic education curriculum
	BE 2.6: Improved STEM learning achievement, and quality and relevance of teaching and learning at the basic school level
	SE 2.2: Improved learning outcomes in STEM subjects, and improved overall learning outcomes for girls
	SE 2.3: Improved quality and relevance of SHS curriculum and enhanced delivery of curriculum
	TVET 2.2: Improved relevance of the TVET curriculum to labour market demands and emerging economic sectors
	NFE 2.2: Relevance of the content and delivery of non-formal literacy programmes strengthened
	TE 2.2: Strengthened STEM education at the tertiary level
SO 8: Expand TVET opportunities at both secondary and tertiary levels and strengthen linkages between the world of work and education and training systems	EM 3.7: Improved mainstreaming of ICT use in education at all levels
	TVET 1.1: Expanded and upgraded teaching, learning, and training infrastructure and diversified programme offerings
	TVET 2.2: Improved relevance of the TVET curriculum to labour market demands and emerging economic sectors
SO 9: Revitalise and expand tertiary education, research, and innovation to address continental challenges and promote global competitiveness	TE 2.2: Strengthened STEM education at the tertiary level
	TE 1.1: Increased numbers of admission places available to meet all needs
SO 10: Promote peace education and conflict prevention and resolution at all levels of education and for all age groups	TE 2.3: Improved research and postgraduate training
	BE 2.4: Improved quality and relevance of inclusive basic education curriculum
	SE 2.3: Improved quality and relevance of SHS curriculum and enhanced delivery of curriculum

SO 11: Improve management of the education system as well build and enhance capacity for data collection, management, analysis, communication, and use	BE 3.3: Improved planning, monitoring, evaluation, and reporting systems
	SE 3.2: Improved research, monitoring, evaluation, and reporting systems
	TVET 3.1: A strong legal, governance, and regulatory framework established for greater coherence and accountability of the TVET system to effectively respond to national socioeconomic development goals
	NFE 3.3: Accountability of NFE systems strengthened
	ISE 3.1: Research, monitoring, and evaluation systems strengthened
	TE 3.4: Improved data collection and management
	EM 3.5: Strengthened accountability and operation structures of MOE agencies and smooth implementation of decentralisation
	EM 3.2: Improved capacity to use evidence to inform plans of the MOE and its agencies and institutions, and MMDAs
SO 12: Set up a coalition of stakeholders to facilitate and support activities resulting from the implementation of CESA 16–25	EM 3.4: Strengthened sector-wide approach to coordinate NGOs', CSOs', and donor partners' support to ensure smooth implementation of the ESP